

1/125

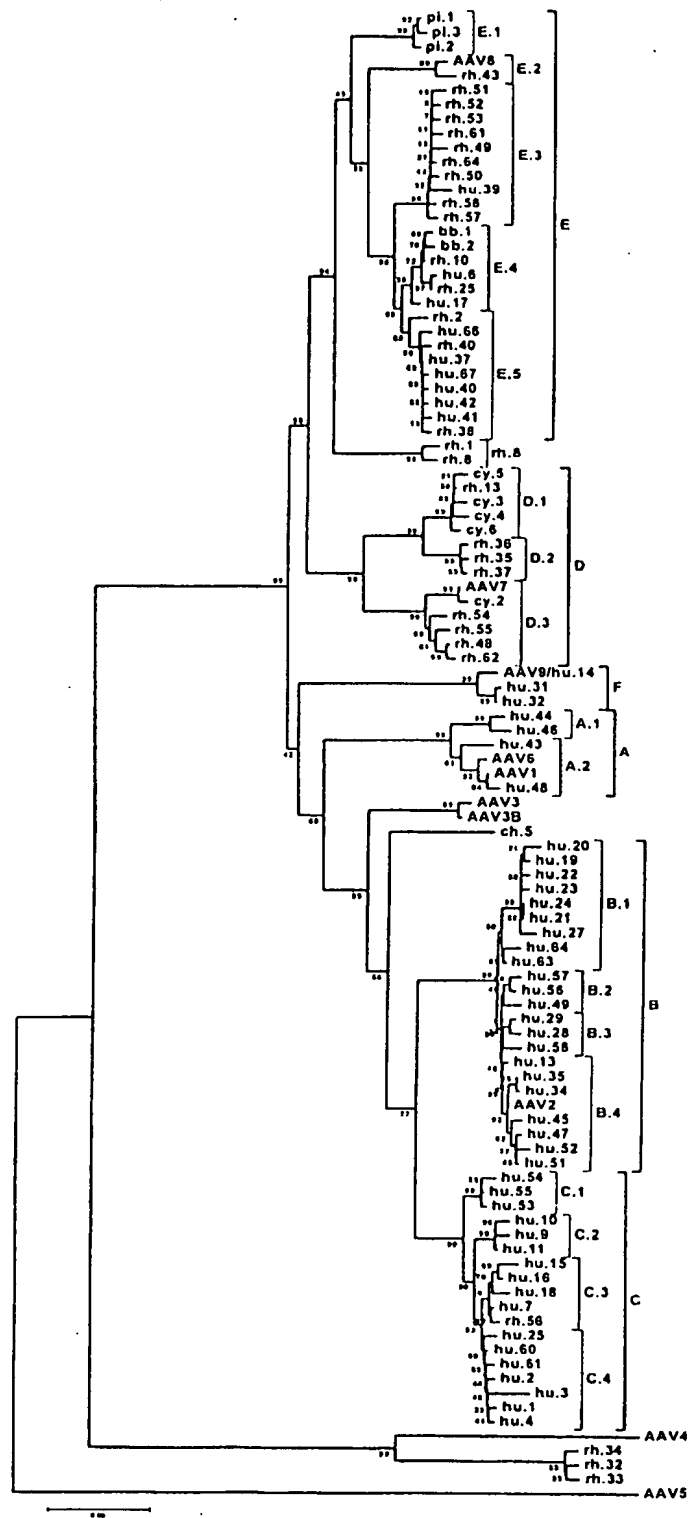


FIG. 1

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	10	20	30	40	50	60	70
AAV5	1	MSFVDHPPDWLEE-VGEGREFLGLEAGPPKPKPNQHQDQARGLVLPGYNYLGPNGGLDRGEPVNRAD				
AAV3-3	1	MAADGYLPDWLEDNLSEGIREWALKPGVPQPKANQHQDNRRLGLVLPGYKYLPGNGLDKGEPVNEAD					
AAV4-4	1	-MTDGYLPDWLEDNLSEGVREWWALQPGAPKPKANQHQDNARGLVLPGYKYLPGNGLDKGEPVNAAD					
AAV1-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQKQDDGRGLVLPGYKYLPGFNGGLDKGEPVNAAD					
hu.46-A	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.48-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQKQDDGRGLVLPGYKYLPGFNGGLDKGEPVNAAD					
hu.44-A	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.43-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQKQDDGRGLVLPGYKYLPGFNGGLDKGEPVNAAD					
AAV6-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQKQDDGRGLVLPGYKYLPGFNGGLDKGEPVNAAD					
hu.34-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.47-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.29-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.63-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.56-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.45-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.57-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.35-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.58-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.28-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.51-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.19-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.49-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.52-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.13-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
AAV2-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.20-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.24-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					
hu.64-B	1	MAADGYLPDWLEDNLSEGIROWWKLKPGPPPKPAERHKDDSRGLVLPGYKYLPGFNGGLDKGEPVNEAD					

FIG. 2A

hu. 27-B	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 21-B	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 22-B	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 23-B	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 7-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 61-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
rh. 56-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 9-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHQDNRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 54-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 53-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 60-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 55-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 2-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 1-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 18-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 3-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 25-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDGSRLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 15-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLYKGEVDEADA
hu. 16-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLYKGEVNEADA
hu. 11-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHQDSDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 10-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKLAERHQDSDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 4-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
rh. 54-D	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGAPKPKANQKQDDSRGLVLPGYKYLGPFFNGLDKGEPVNAADA
rh. 48-D	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGAPKPKANQKQDDSRGLVLPGYKYLGPFFNGLDKGEPVNAADA
rh. 55-D	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGAPKPKANQKQDDSRGLVLPGYKYLGPFFNGLDKGEPVNAADA
rh. 62-D	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGAPKPKANQKQDDSRGLVLPGYKYLGPFFNGLDKGEPVNAADA
AAV7-D	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGAPKPKANQKQDDSRGLVLPGYKYLGPFFNGLDKGEPVNAADA
rh. 52-E	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGAPKPKANQKQDDSRGLVLPGYKYLGPFFNGLDKGEPVNAADA
rh. 51-E	1	MVADGYLPDWLEDTLSEGIQWQWKLKPGAPKPKANQKQDDSRGLVLPGYKYLGPFFNGLDKGEPVNAADA
hu. 39-E	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGAPKPKANQKQDDSRGLVLPGYKYLGPFFNGLDKGEPVNAADA

rh. 53-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
hu. 37-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
rh. 43-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
rh. 50-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
rh. 49-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
rh. 61-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
hu. 41-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
rh. 64-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
hu. 42-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
rh. 57-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
hu. 40-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
AAV8-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
rh. 58-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
rh. 40-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
hu. 67-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
hu. 17-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
hu. 6-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
hu. 66-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
rh. 38-E	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPKPKANQQKDDGRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
hu. 32-F	1	MAADGYLPDWLEDTLSEGIQWVKLKP	GGPPPPKPAERHKDDSRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
AAV9/hu	1	MAADGYLPDWLEDNLSEGIREWWDLKP	GAPQPKANQQHQDNARGLVLP	GYKYLGPFGNGLDKGEPVNAADA
hu. 31-F	1	MAADGYLPDWLEDTLSEGIQWVKLKP	GGPPPPKPAERHKDDSRGLVLP	GYKYLGPFGNGLDKGEPVNAADA
AAV5	70	VAREHDISYNEQLEAGDNPYLKYNHADA	EFFQEKLADDTSFGGNLGKAVFQAKKR	VLEPFG-LVEEGAHTA
AAV3-3	71	AALEHDKAYDQQLKAGDNPYLKYNHADA	EFFQERLQEDTSFGGNLGRAVFQAKKR	ILEPLG-LVEEAAHTA
AAV4-4	70	AALEHDKAYDQQLKAGDNPYLKYNHADA	EFFQERLQEDTSFGGNLGRAVFQAKKR	VLEPLG-LVEQAHTA
AAV1-A	71	AALEHDKAYDQQLKAGDNPYLKYNHADA	EFFQERLQEDTSFGGNLGRAVFQAKKR	VLEPLG-LVEEGAHTA
hu. 46-A	71	AALEHDKAYDRQLDSGDNPYLKYNHADA	EFFQERLKEDTSFGGNLGRAVFQAKKR	VLEPLG-LVEEGAHTA

FIG. 2C

hu. 48-A 71 AALEHDKAYDQQLKAGDNPYLRYNHADADEFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEGAKTA
hu. 44-A 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEGAETA
hu. 43-A 71 AALEHDKAYDQQLKAGDNPYPRYNHADADEFQERLQEDTPFGGNLGRAVFQAKKRVLEPLG-LVEEAAKTA
AAV6-A 71 AALEHDKAYDQQLKAGDNPYLRYNHADADEFQERLQEDTSFGGNLGRAVFQAKKRVLEPFG-LVEEGAKTA
hu. 34-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 47-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVGEPPVKA
hu. 29-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 63-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 56-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 45-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 57-B 70 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 35-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 58-B 71 AALEHDKAYDRQLDSDGNPYLYKYNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 28-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLS-LVEEPPVKA
hu. 51-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVGEPPVKA
hu. 19-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRILEPLG-LVEEPPVKA
hu. 49-B 71 AALEYDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 52-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVGEPPVKA
hu. 13-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
AAV2-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 20-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 24-B 71 AALEHDKAYDRQLDSDGNPYLYKNHVDAEFQERLKEDTSFGGNLGRAVFQAKKRILEPLG-LVEEPPVKA
hu. 64-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRILEPLG-LVEEPPVKA
hu. 27-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 21-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRILEPLG-LVEEPPVKA
hu. 22-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRILEPLG-LVEEPPVKA
hu. 23-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRILEPLG-LVEEPPVKA
hu. 7-C 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
hu. 61-C 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA
rh. 56-C 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA

hu. 9-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 54-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 53-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 60-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 55-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 2-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 1-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 18-C	71	AALEHDKAYDRQLESGDN	PYLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 3-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLRPLR	KPKVKTA
hu. 25-C	71	AALEHDKAYDRQLNSGDN	PYLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 15-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVGE	PVKTA
hu. 16-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHAGA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 11-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 10-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 4-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
rh. 54-D	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	AAKTA
rh. 48-D	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	AAKTA
rh. 55-D	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	GAKTA
rh. 62-D	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LAEE	AAKTA
AAV7-D	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	GAKTA
rh. 52-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	GAKTA
rh. 51-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	GAKTA
hu. 39-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	GAKTA
rh. 53-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	GAKTA
hu. 37-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	AAKTA
rh. 43-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	GAKTA
rh. 50-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	GAKTA
rh. 49-E	71	AALEHDKAYDQQLKAGDN	PHLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	GAKTA
rh. 61-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-LVEE	GAKTA
hu. 41-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	NLGRA	VFQAK	KRVLE	PLG-PVEE	AAKTA

rh. 64-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEGA	AKTA
hu. 42-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEAA	AKTA
rh. 57-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEGA	AKTA
hu. 40-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEAA	AKTA
AAV8-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEGA	AKTA
rh. 58-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEAA	AKTA
rh. 40-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEAA	AKTA
hu. 67-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEAA	AKTA
hu. 17-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEGA	AKTA
hu. 6-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEGA	AKTA
hu. 66-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEAA	AKTA
rh. 38-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEAA	AKTA
hu. 32-F	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEAA	AKTA
AAV9/hu	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEAA	AKTA
hu. 31-F	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAV	FQAKKRVLEPLG-LVEEAA	AKTA
AAV5	139	PTGKRIDDHFP	-----	-----	-----
AAV3-3	140	PGKKGAVDQSPQ	-EPDSSSGVGKSGKQ	PARKRLNFGQ	TGDSSEVPD-PQPLGEPPAAPTSLGSNTMASGG
AAV4-4	139	PGKKRPLIESPQ	-QPDSSSTGIGKKGKQ	PAKKKLVFEDET	GAGDGP----PEGSTSGAMS--DDSEMRAAA
AAV1-A	140	PGKKRPVEQSPQ	-EPDSSSGIGKTGQQ	PAKKRLNFGQ	TGDSSEVPD-PQPLGEPPATPAAVGPPTTMASGG
hu. 46-A	140	PGKKRPVEQSPQ	-EPDSPSGIGKTGQQ	PAKKRLNFGQ	TGDSSEVPD-PQPLGEPPATPAAVGPPTTMASGG
hu. 48-A	140	PGKKRPVEQSPQ	-EPDSSSGIGKTGQQ	PAKKRLNFGQ	TGDSSEVPD-PQPLGEPPATPAAVGPPTTMASGG
hu. 44-A	140	PGKKRPVEQSPQ	-GPDSSSGIGKTGQQ	PAKKRLNFGQ	TGDSSEVPD-PQPLGEPPATPAAVGPPTTMASGG
hu. 43-A	140	PGKKRPVEPSPQ	RSPDSSSTGIGKKGQQ	PAKKRLNFGQ	TGDSSEVPD-PQPLGEPPATPAAVGPPTTMASGG
AAV6-A	140	PGKKRPVEQSPQ	-EPDSSSGIGKTGQQ	PAKKRLNFGQ	TGDSSEVPD-PQPLGEPPATPAAVGPPTTMASGG
hu. 34-B	140	PGKKRPVEHSPV	-EPDSSSGTGKAGQQ	PARKRLNFGQ	TGADSVDP-PQPLGQPPAAPSGLGTNTMATGS
hu. 47-B	140	PGKKRPVEHSPV	-EPDSSSGTGKAGQQ	PARKRLNFGQ	TGADSVDP-PQPLGQPPAAPSGLGTNTMATGS
hu. 29-B	140	PGKKRPVEHSPA	-EPDSSSGTGKSGNQ	PARKRLNFGQ	TGDSVDP-PQPLGQPPAAPSGLGTNTMATGS

hu. 63-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 56-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 45-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 57-B 139 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 35-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 58-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 28-B 140 PGKKRPVEHSPA-EPDSSSGTGKSGNQPARKRLNFGQTGDSDSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 51-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 19-B 140 PGEKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMASGS
 hu. 49-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 52-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 13-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 AAV2-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 20-B 140 PGEKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMASGS
 hu. 24-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PRPLGQPPAAPSGLGTTNTMASGS
 hu. 64-B 140 PGKKRPVEHSLA-EPDSSSGTGKAGQQPARRRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 27-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMASGS
 hu. 21-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PRPLGQPPAAPSGLGTTNTMASGS
 hu. 22-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMASGS
 hu. 23-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMASGS
 hu. 7-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 61-C 140 PGKKRPVEHPPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 rh. 56-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 9-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGHQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSTSLGTTNTMATGS
 hu. 54-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSTSLGTTNTMATGS
 hu. 53-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLRQPPAAPSTSLGTTNTMATGS
 hu. 60-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 55-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSTSLGTTNTMATGS
 hu. 2-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQRPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
 hu. 1-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS

hu. 18-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMASGS
hu. 3-C 141 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS
hu. 25-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS
hu. 15-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS
hu. 16-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS
hu. 11-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGHQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSLGSTTMATGS
hu. 10-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGHQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSLGSTTMATGS
hu. 4-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSLGSTTMATGS
rh. 54-D 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAGPSGLSGTMAAGG
rh. 48-D 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
rh. 55-D 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
rh. 62-D 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
AAV7-D 140 PAKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGTMAAGG
rh. 52-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
rh. 51-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
hu. 39-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGRTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
rh. 53-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
hu. 37-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
rh. 43-E 140 PGKKRPVEQSPQ-EPDSSSGTGKAGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSGVGPNTMAAGG
rh. 50-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
rh. 49-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
rh. 61-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
hu. 41-E 140 PGKKRPVEPPQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
rh. 64-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
hu. 42-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
rh. 57-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAGPSGLSGTMAAGG
hu. 40-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
AAV8-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSGVGPNTMAAGG
rh. 58-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAAPSSVSGTMAAGG
rh. 40-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPIGEPPAGPSGLSGTMAAGG

FIG. 2H

hu. 67-E	140	PGKKRPVEPSQ	RSPDSSTGIGKKGQ	QPAKRLNFGQT	GDSEVPD-PQ	PIGEP	PAGPSGLSGT	MAAGG
hu. 17-E	140	PGKKRPVEPSQ	RSPDSSTGIGKKGQ	QPAKRLNFGQT	GDSEVPD-PQ	PIGEP	PAGPSGLSGT	MAAGG
hu. 6-E	140	PGKKRPVEPSQ	RSPDSSTGIGKKGQ	QPAKRLNFGQT	GDSEVPD-PQ	PIGEP	PAGPSGLSGT	MAAGG
hu. 66-E	140	PGKKRPVEPSQ	RSPDSSTGIGKKGQ	QPAKRLNFGQT	GDSEVPD-PQ	PIGEP	PAGPSGLSGT	MAAGG
rh. 38-E	140	PGKKRPVEPSQ	RSPDSSTGIGKKGQ	RPAKRLNFGQT	GDSEVPD-PQ	PIGEP	PAGPSGLSGT	MAAGG
hu. 32-F	140	PGKKRPVEQSPQ	-EPDSSAGIGKSGS	QPAKRLNFGQT	GDSEVPD-PQ	PIGEP	PAPSGVSLT	MASGG
AAV9/hu	140	PGKKRPVEQSPQ	-EPDSSAGIGKSGA	QPAKRLNFGQT	GDSEVPD-PQ	PIGEP	PAPSGVSLT	MASGG
hu. 31-F	140	PGKKRPVEQSPQ	-EPDSSAGIGKSGS	QPAKRLNFGQT	GDSEVPD-PQ	PIGEP	PAPSGVSLT	MASGG
							
AAV5	198	GGPLGDN	NQADGVGNASGD	WHCDSTWMGDR	VVTKSTR	TWVLP	SYNNHQYREIKS-GS	VDDGSNANAYFGY
AAV3-3	208	GAPMADN	NEGADGVGNSSGN	WHCDSQWLGD	RVITTS	TRT	WALPTYNNHLYKQIS--SQ	SASNDNHYYFGY
AAV4-4	202	GGAAVEG	GGADGVGNASGD	WHCDSTWSEGH	VTTSTR	TWVLP	TYNNHLYKRLG----	ESLQSN
AAV1-A	208	GAPMADN	NEGADGVGNASGN	WHCDSTWLGDR	VITTS	TRT	WALPTYNNHLYKQISS-AST	GASNDNHYYFGY
hu. 46-A	208	GAPMADN	NEGADGVGNASGN	WHCDSTWLGDR	VITTS	TRT	WALPTYNNHLYKQISS-AST	GASNDNHYYFGY
hu. 48-A	208	GAPMADN	NEGADGVGNASGN	WHCDSTWLGDR	VITTS	TRT	WALPTYNNHLYKQISS-TS	TGASNDNHYYFGY
hu. 44-A	208	GAPMADN	NEGADGVGNASGN	WHCDSTWLGDR	VITTS	TRT	WALPTYNNHLYKQISS-AST	GASNDNHYYFGY
hu. 43-A	209	GAPMADN	NEGADGVGNASGN	WHCDSTWLGDR	VITTS	TRT	WALPTYNNHLYKQISS-AST	GASNDNHYYFGY
AAV6-A	208	GAPMADN	NEGADGVGNASGN	WHCDSTWLGDR	VITTS	TRT	WALPTYNNHLYKQISS-AST	GASNDNHYYFGY
hu. 34-B	208	GAPMADN	NEGADGVGNSSGN	WHCDSTWMGDR	VITTS	TRT	WALPTYNNHLYKQISS--SQ	SASNDNHYYFGY
hu. 47-B	208	GAPMADN	NEGADGVGNSSGN	WHCDSTWMGDR	VITTS	TRT	WALPTYNNHLYKQISS--SQ	SASNDSHYYFGY
hu. 29-B	208	GAPMADN	NEGADGVGNSSGN	WHCDSTWMGDR	VITTS	TRT	WALPTYNNHLYKQISS--SQ	SASNDNHYYFGY
hu. 63-B	208	GAPMADN	NEGADGVGNSSGN	WHCDSTWMGDR	VITTS	TRT	WALPTYNNHLYKQISS--SQ	SASNDNHYYFGY
hu. 56-B	208	GAPMADN	NEGADGVGNSSGN	WHCDSTWMGDR	VITTS	TRT	WALPTYNNHLYKQISS--SQ	SASNDNHYYFGY
hu. 45-B	208	GAPMADN	NEGADGVGNSSGN	WHCDSTWMGDR	VITTS	TRT	WALPTYNNHLYKQISS--SQ	SASNDNHYYFGY
hu. 57-B	207	GAPMADN	NEGADGVGNSSGD	WHCDSTWMGDR	VITTS	TRT	WALPTYNNHLYKQISS--SQ	SASNDNHYYFGY
hu. 35-B	208	GAPMADN	NEGADGVGNSSGN	WHCDSTWMGDR	VITTS	TRT	WALPTYNNHLYKQISS--SQ	SASNDNHYYFGY
hu. 58-B	208	GAPMADN	NDGADGVGNSSGN	WHCDSTWMGDR	VITTS	TRT	WALPTYNNHLYKQISS--SQ	SASNDNHYYFGY
hu. 28-B	208	GAPMADN	NEGADGVGNSSGN	WHCDSTWMGDR	VITTS	TRT	WALPTYNNHLYKQISS--SQ	SASNDNHYYFGY

hu. 51-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 19-B 208 GAPMADNNEGADGVGNSSGNWYCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 49-B 208 GAPMADNNEGADGVGNSSGWSHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 52-B 208 GAPMADNNEGADGVGNSSGNRCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 13-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 AAV2-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 20-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 24-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 64-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 27-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 21-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 22-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTCENNHLKYKQIS--SQSGASNDNHYFGY
 hu. 23-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 7-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 61-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGC
 rh. 56-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 9-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 54-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 53-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 60-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 55-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 2-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 1-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 18-C 208 GAPVADNNEGADGVGNSSGNWHCHDSTWMDRVIATSTRTWALPTYNNHLYKQIS--SQSGACNDNHYFGY
 hu. 3-C 209 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 25-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 15-C 208 GAPVADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 16-C 208 GAPVADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 11-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
 hu. 10-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY

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hu.4-C	208	GAPMADNNEGADGVGNSSGNWCHCD	QWLGLDRVITTTSTRTWALPTYNNHLYKQISS--SQSGASNDNHYFGY
rh.54-D	209	GAPMADNNEGADGVGNASGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISS-QSAGSTNDNVYFGY
rh.48-D	209	GAPMADNNEGADGVGNASGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISS-QSAGSTNDNVYFGY
rh.55-D	209	GAPMADNNEGADGVGNSSGNWCHCD	STRLGLDRVITTTSTRTWALPTYNNHLYKQISS-QSAGSTNDNVYFGY
rh.62-D	209	GAPMADNNEGADGVGNASGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISS-QSAGSTNDNVYFGY
AAV7-D	209	GAPMADNNEGADGVGNASGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISS-ETAGSTNDNTYFGY
rh.52-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
rh.51-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
hu.39-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
rh.53-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
hu.37-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
rh.43-E	208	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGATNDNTYFGY
rh.50-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
rh.49-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
rh.61-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
hu.41-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
rh.64-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
hu.42-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
rh.57-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
hu.40-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
AAV8-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGATNDNTYFGY
rh.58-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
rh.40-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
hu.67-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
hu.17-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
hu.6-E	209	GAPMADNNEGADGVGNSSGNWCHCD	SAWLGLDRVITTTSTRPWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
hu.66-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
rh.38-E	209	GAPMADNNEGADGVGNSSGNWCHCD	STWLGLDRVITTTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGY
hu.32-F	208	GAPVADNNEGADGVGNSSGNWCHCD	QWLGLDRVITTTSTRTWALPTYNNHLYKQISNSTSGGSSNDNAYFGY
AAV9/hu	208	GAPVADNNEGADGVGNSSGNWCHCD	QWLGLDRVITTTSTRTWALPTYNNHLYKQISNSTSGGSSNDNAYFGY

FIG. 2K

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hu.31-F 208 GAPVADNEGADGVGSSGNWHCDSQLGDRVITSTRTWALPTYNNHLYKQISNSTSGGSSNDNAYFGY
|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
 AAV5 267 STPWGYFDENRFSHSPRDWQRLINNYWGFRPRSLRVKIFNIQVKEVTQDSTTTIANNLTSTVQVFTD
 AAV3-3 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKKLSFKLFNIQVRGVTQNDGTTIANNLTSTVQVFTD
 AAV4-4 267 STPWGYFDENRFHCHFSRPDWQRLINNNWGMRPKAMRVKIFNIQVKEVTSNGETTVANNLTSTVQIFAD
 AAV1-A 277 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTNDGVTTIANNLTSTVQVFS
 hu.46-A 277 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTNDGVTTIANNLTSTVQVFS
 hu.48-A 277 GTPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVEEVTNDGVTTIANNLTSTVQVFS
 hu.44-A 277 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTNDGVTTIANNLTSTVQVFS
 hu.43-A 278 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTNDGVTTIANNLTSTVQVFS
 AAV6-A 277 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTNDGVTTIANNLTSTVQVFS
 hu.34-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.47-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.29-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.63-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.56-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.45-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.57-B 275 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.35-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.58-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVREVTQNDGTTIANNLTSTVQVFTD
 hu.28-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.51-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.19-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.49-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.52-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.13-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 AAV2-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.20-B 276 STPWGHFDENRFHCHFSRPDWQRLINNNWGFRPKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD

hu.24-B 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.64-B 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGSRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.27-B 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.21-B 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.22-B 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.23-B 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.7-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.61-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 rh.56-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.9-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.54-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.53-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.60-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.55-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.2-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.1-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.18-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.3-C 277 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.25-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.15-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.16-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.11-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.10-C 276 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 hu.4-C 276 STPWGYFDFNRFHCHFSRQWQRLVNNRGRPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD
 rh.54-D 278 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGTTIANNLTSTVQVFS
 rh.48-D 278 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGTTIANNLTSTVQVFS
 rh.55-D 278 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGTTIANNLTSTVQVFS
 rh.62-D 278 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGTTIANNLTSTVQVFS
 AAV7-D 278 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGTTIANNLTSTIQVFS
 rh.52-E 279 STPWGYFDFNRFHCHFSRQWQRLINNNWGFPRKRLNFKLFNIQVKEVTNEGTTIANSLTSTIQVFTD

rh. 51-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	420
hu. 39-E	279	STPWGYLDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	410
rh. 53-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	400
hu. 37-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	390
rh. 43-E	278	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	380
rh. 50-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	370
rh. 49-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	360
rh. 61-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	350
hu. 41-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	340
rh. 64-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	330
hu. 42-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	320
rh. 57-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	310
hu. 40-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	300
AAV8-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	290
rh. 58-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	280
rh. 40-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	270
hu. 67-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	260
hu. 17-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	250
hu. 6-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	240
hu. 66-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	230
rh. 38-E	279	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	220
hu. 32-F	278	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	210
AAV9/hu	278	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	200
hu. 31-F	278	STPWGYFDENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNIQVKEVTQNEGKTKIANNLTSTIQVFTD	190

AAV5	337	DDYQLPYVVGNGTEGCLPAFP	PQVFTLPQYGYATLNRD-N	TENPTERS	SSFFCLEYFP	SKMLRTGN	NFEET
AAV3-3	346	SEYQLPYVLGSAHQGCLPP	FPADVFMVPQYGYLT	LNNG--SQAVGR	SSFCLEYFP	SQMLRTGN	NFQFS
AAV4-4	337	SSYELPYVMDAGQEGSLPP	FPNDVFMVPQYGYCGL	VTGNTSQOQTDR	NAFCLEYFP	SQMLRTGN	NFEIT

FIG. 2N

AAV1-A 347 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.46-A 347 SEYQLPYVLGSAHQGRLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSSYCYLEYFPPSQMLRTGNNFTFS
 hu.48-A 347 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.44-A 347 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.43-A 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 AAV6-A 347 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.34-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNE---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.47-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.29-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.63-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.56-B 346 LEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.45-B 346 SGYQLPYVLGSAHQGCLPPFPADVFMVPQYGYPTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.57-B 345 LEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.35-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.58-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.28-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.51-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.19-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.49-B 346 SEYQLPYVPGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.52-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.13-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 AAV2-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.20-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.24-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.64-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.27-B 346 SGYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.21-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.22-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.23-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS
 hu.7-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS

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hu.61-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 rh.56-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.9-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.54-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.53-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.60-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.55-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.2-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.1-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.18-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.3-C 347 SEYQLPYVPGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.25-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSPFYCYEYFPSQMLRTGNNFQFS
 hu.15-C 346 SGYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.16-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.11-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.10-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNLTF
 hu.4-C 346 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 rh.54-D 348 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQSVGRSSFYCYEYFPSQVLRGNNFQFS
 rh.48-D 348 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQSVGRSSFYCYEYFPSQMLRTGNNFQFS
 rh.55-D 348 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQSVGRSSFYCYEYFPSQMLRTGNNFQFS
 rh.62-D 348 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNND---SQSVGRSSFYCYEYFPSQMLRTGNNFQFS
 AAV7-D 348 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQSVGRSSFYCYEYFPSQMLRTGNNFEFS
 rh.52-E 349 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTPNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 rh.51-E 349 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.39-E 349 SEYQPPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 rh.53-E 349 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 hu.37-E 349 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFEFS
 rh.43-E 348 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFT
 rh.50-E 349 SEYQLPYVLGSAHQGCLPPFPADVMPQYGYLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS
 rh.49-E 349 SEYQLPYVLGSAHQGCLPPFPADVMPQYGNLTLNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS

FIG. 2B

rh. 61-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---	430	440	450	460	470	480	490
hu. 41-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---						
rh. 64-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
hu. 42-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
rh. 57-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
hu. 40-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
AAV8-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
rh. 58-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
rh. 40-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
hu. 67-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
hu. 17-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
hu. 6-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
hu. 66-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
rh. 38-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---							
hu. 32-F	348	SDYQLPYVLGSAHEGCLPPFPADVFMIPQYGYLTLNDG---							
AAV9/hu	348	SDYQLPYVLGSAHEGCLPPFPADVFMIPQYGYLTLNDG---							
hu. 31-F	348	SDYQLPYVLGSAHEGCLPPFPADVFMIPQYGYLTLNDG---							

AAV5	406	YNFEEVPFHSSFAPSQNLFKLANPLVDQYLYRFBVSTN----	430	440	450	460	470	480	490
AAV3-3	413	YTFEDVPFHSSYAHSQSLDRMLNPLIDQYLYLNRTOGTTSGTTNQSRLLFSQAGPQMSLSQARNWLPGP						
AAV4-4	407	YSFEKVPFHSSYAHSQSLDRMLNPLIDQYLYLNRTOGTTSGTTNQSRLLFSQAGPQMSLSQARNWLPGP							
AAV1-A	414	YTFEEVPFHSSYAHSQSLDRMLNPLIDQYLYLNRTO-NQSGSAQNKDILLFSRGSPAGMSVQPKNWLPGP							
hu. 46-A	414	YTFEEVPLHSSCAHSQSLDRMLNPLIDQYLYLNRTO-NQSGSAQNKDILLFSRGSPAGMSVQPKNWLPGP							
hu. 48-A	414	YTFEEVPFHSSYAHSQSLDRMLNPLIDQYLYPNRTO-NQSGSAQNKDILLFSRGSPAGMSVQPKNWLPGP							
hu. 44-A	414	YTFEEVPLHSSYAHSQSLDRMLNPLIVQYLYLNRTO-NQSGSAQNKDILLFSRGSPAGMSVQPKNWLPGP							
hu. 43-A	415	YTFEEVPLHSSYAHSQSLDRMLNPLIDQYLYLNRTO-NQSGSAQNKDILLFSRGSPAGMSVQPKNWLPGP							
AAV6-A	414	YTFEDVPFHSSYAHSQSLDRMLNPLIDQYLYLNRTO-NQSGSAQNKDILLFSRGSPAGMSVQPKNWLPGP							
hu. 34-B	413	YTFEDVPFHSSYAHSQSLGRMLNPLIDQYLYLNRTO-NQSGSAQNKDILLFSRGSPAGMSVQPKNWLPGP							

hu.47-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSTTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.29-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.63-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.56-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.45-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSTTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.57-B 412 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.35-B 413 YTFEDVPFHSSYAHQSQSLGRMLMNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.58-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.28-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIQDQSRNWLPGP
hu.51-B 413 YTFEDVPFHSGYAHQSQSLDRMLMNPLIDQYLYYLSTTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.19-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP
hu.49-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.52-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSTTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.13-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
AAV2-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.20-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP
hu.24-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP
hu.64-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLVDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
hu.27-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDVRDQSRNWLPGP
hu.21-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP
hu.22-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP
hu.23-B 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP
hu.7-C 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLNKTQ-SNSGTLQQSRLLFSQAGPTSMSLQAKNWLPGP
hu.61-C 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTMSLQAKNRLPGP
rh.56-C 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLNKTQ-SNSGALQQSRLLFSQAGPTSMSLQAKNWLPGP
hu.9-C 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLNRTQ-SNSGTLQQSRLLFSQAGPTSMSLQAKNWLPGP
hu.54-C 413 YTFEDVPFHSSYAHQSGLDRMLMNPLIDQYLYYLNRTQ-TASGT-QQSRLLFSQAGPTSMSLQAKNWLPGP
hu.53-C 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLNRTQ-TASGT-QQSRLLFSQAGPTSMSLQAKNWLPGP
hu.60-C 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLVDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTMSLQAKNWLPGP
hu.55-C 413 YTFEDVPFHSSYAHQSQSLDRMLMNPLIDQYLYYLNRTQ-TASGT-QQSRLLFSQAGPTSMSLQAKNWLPGP

hu.2-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
 hu.1-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
 hu.18-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
 hu.3-C 414 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
 hu.25-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
 hu.15-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
 hu.16-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
 hu.11-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
 hu.10-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
 hu.4-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
 rh.54-D 415 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLARTQSNPGTSGNRELQFYQGGPTTMAEQAKNWLPGP
 rh.48-D 415 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLARTQSNAGTAGNRELQFYQGGPTTMAEQAKNWLPGP
 rh.55-D 415 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLARTQSNAGTAGNRELQFYQGGPTTMAEQAKNWLPGP
 rh.62-D 415 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLARTQSNAGTAGNRELQFYQGGPTTMAEQAKNWLPGP
 AAV7-D 415 YSFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLARTQSNPGTAGNRELQFYQGGPTTMAEQAKNWLPGP
 rh.52-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLLSSQAGPSNMSAQARNWLPGP
 rh.51-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQARNWLPGP
 hu.39-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLLFSRAGPSNMSAQARNWLPGP
 rh.53-E 416 YTFEDVPFHSSYVHSQSLSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQARNWLPGP
 hu.37-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPANMSAQAKNWLPGP
 rh.43-E 415 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQT-TGGTANTQTGLFSQGGPNTMANQAKNWLPGP
 rh.50-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLVDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQARNWLPGP
 rh.49-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQARNWLPGP
 rh.61-E 416 YPFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQARNWLPGP
 hu.41-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQS-TGGTQGTQQLLFSQAGPANMSAQAKNWLPGP
 rh.64-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQARNWLPGP
 hu.42-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQS-TGGTQGTQQLLFSQAGPANMSAQAKNWLPGP
 rh.57-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQARNWLPGP
 hu.40-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQS-TGGTQGTQQLLFSQAGPANMSAQAKNWLPGP
 AAV8-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLSRTQT-TGGTANTQTGLFSQGGPNTMANQAKNWLPGP

hu. 58-B 482 CYRQQRVSKTSADN-----NNSEYSWIGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG
 hu. 28-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG
 hu. 51-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG
 hu. 19-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD
 hu. 49-B 482 CYRQQRVSKTAADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG
 hu. 52-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG
 hu. 13-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG
 AAV2-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG
 hu. 20-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD
 hu. 24-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD
 hu. 64-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD
 hu. 27-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD
 hu. 21-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD
 hu. 22-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD
 hu. 23-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD
 hu. 7-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG
 hu. 61-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG
 rh. 56-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG
 hu. 9-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG
 hu. 54-C 481 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNNGDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKEG
 hu. 53-C 481 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKEG
 hu. 60-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG
 hu. 55-C 481 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKEG
 hu. 2-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG
 hu. 1-C 482 CYRQRLSKQANGN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG
 hu. 18-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG
 hu. 3-C 483 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG
 hu. 25-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG
 hu. 15-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG
 hu. 16-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG

hu.11-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYRLNGRDSLVPNGPAMASHKDDDEKFFPMHGTLI FGKQG
 hu.10-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEKFFPMHGTLI FGKQG
 hu.4-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEKFFPMHGTLI FGKQG
 rh.54-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVNPGVAMATHKDDDEDRFFPSSGVLI FGKTG
 rh.48-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVNPGVAMATHKDDDEERFFPSSGVLI FGKTG
 rh.55-D 485 CFRQRRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVNPGVAMATHKDDDEERFFPSSGVLI FGKTG
 rh.62-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVNPGVAMATHKDDDEERFFPSSGVLI FGKTG
 AAV7-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVNPGVAMATHKDDDEDRFFPSSGVLI FGKTG
 rh.52-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 rh.51-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 hu.39-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 rh.53-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 hu.37-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 rh.43-E 484 CYRQQRVSTTTGQN-----NNSNFAWTAGTKYHLNGRNSLANPGIAMATHKDDDEERFFPVTG-SCFWQQN
 rh.50-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 rh.49-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 rh.61-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 hu.41-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 rh.64-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 hu.42-E 485 CYRQQRVSTTTSQS-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 rh.57-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 hu.40-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 AAV8-E 485 CYRQQRVSTTTGQN-----NNSNFAWTAGTKYHLNGRNSLANPGIAMATHKDDDEERFFPSNGILIFGKQN
 rh.58-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 rh.40-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 hu.67-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 hu.17-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 hu.6-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 hu.66-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 rh.38-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG

hu. 32-F	483	SYRQQRVSTTVTQN-----NNSEFAWP	GASSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG	570	580	590	600	610	620	630
AAV9/hu	483	SYRQQRVSTTVTQN-----NNSEFAWP	GASSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG							
hu. 31-F	483	SYRQQRVSTTVTQN-----NNSEFAWP	GASSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG							
AAV5	534	ANPGTTATYLEGNMLITSESETQPVNRVAYNVGGQMATNNQSS	TTAPATGTYNLQEI	570	580	590	600	610	620	630
AAV3-3-	548	T--TASNAELD-NVMITDEEEIRTTNPVATEQYGTVANLQSSNTAPT	TGTVNHQ							
AAV4-4-	546	N--GNTATVPG-TLIFTSEEEELAAATNATDTMWGNLPGDQSN	NLPTVDRLTALGAVPGMVWQNRDIYY							
AAV1-A-	548	A--GASNTALD-NVMITDEEEIKATNPVATERFGTVAVNFQSS	SDPATGDVHAMGALPGMVWQDRDVYL							
hu. 46-A	548	A--GASNTALD-NVMITDEEEIKATNPVATERFGTVAVNFQSS	SDPATGDVHAMGALPGMVWQDRDVYL							
hu. 48-A	548	A--GASNTALD-NVMITDEEEIKATNPVATERFGTVAVNFQSS	SDPATGDVHAMGALPGMVWQDRDVYL							
hu. 44-A	548	A--GASNTALD-NVMITDEEEIKATNPVATERFGTVAVNFQSS	SDPATGDVHAMGALPGMVWQDRDVYL							
hu. 43-A	549	A--GASNTALD-NVMITDEEEIKATNPVATERFGTVAVNFQSS	SDPATGDVHAMGALPGMVWQDRDVYL							
AAV6-A	548	A--GASNTALD-NVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 34-B	547	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 47-B	547	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 29-B	547	P--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 63-B	547	S--GKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 56-B	547	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 45-B	547	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 57-B	546	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 35-B	547	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 58-B	547	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 28-B	547	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 51-B	547	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 19-B	547	S--GKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 49-B	547	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 52-B	547	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							
hu. 13-B	547	S--EKTNVDDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQR	GNRQAATADVNTQGVLP							

FIG. 2W

AAV2-B 547 S--EKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQRGNRQAATAADVNTQGVLPGMVWQDRDVYL

hu. 20-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 24-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 64-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 27-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 21-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 22-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 23-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 7-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 61-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

rh. 56-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 9-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 54-C 546 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 53-C 546 T--NATNAELE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 60-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 55-C 546 T--NATNAELE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 2-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 1-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 18-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 3-C 548 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 25-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 15-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 16-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 11-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 10-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 4-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

rh. 54-D 550 A--TN-KTTLE-NVMTNEEEIRPTNPVATEEYGTSSNLQAANTAAQTQVVNNQGAALPGMVWQNRDVYL

rh. 48-D 550 A--AN-KTTLE-NVMTNEEEIRPTNPVATEEYGTSSNLQAANTAAQTQVVNNQGAALPGMVWQNRDVYL

rh. 55-D 550 A--AN-KTTLE-NVMTNEEEIRPTNPVATEEYGTSSNLQAANTAAQTQVVNNQGAALPGMVWQNRDVYL

rh. 62-D 550 A--AN-KTTLE-NVMTNEEEIRPTNPVATEEYGTSSNLQAANTAAQTQVVNNQGAALPGMVWQNRDVYL

FIG. 2X

AAV7-D	550	A--TN-KTTLE-NVLMTNEEEIRPTNPVATEEYGI	VSSNLQAANTAAQTQVVNNQ	GALPGMVWQNRDVYL
rh. 52-E	550	A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
rh. 51-E	550	A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
hu. 39-E	550	A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
rh. 53-E	550	A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
hu. 37-E	550	A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
rh. 43-E	548	A--ARDNADYS-DVMLTSEEEIKTTNPVATEEY	GI	VADNLQQQTAPIGTVNSQ
rh. 50-E	550	A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
rh. 49-E	550	A--GKDNMGYS-NVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
rh. 61-E	550	A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
hu. 41-E	550	A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
rh. 64-E	550	A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
hu. 42-E	550	A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
rh. 57-E	550	A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
hu. 40-E	550	A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
AAV8-E	550	A--ARDNADYS-DVMLTSEEEIKTTNPVATEEY	GI	VADNLQQQTAPIGTVNSQ
rh. 58-E	550	A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
rh. 40-E	550	A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
hu. 67-E	550	A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
hu. 17-E	550	A--GKDNVDYS-SVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
hu. 6-E	550	A--GKDNVDYS-SVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
hu. 66-E	550	A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
rh. 38-E	550	A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQY	GVVADNLQQQTAPIVGAVNSQ	GALPGMVWQNRDVYL
hu. 32-F	548	T--GRDNVDAD-KVMITNEEEIKTTNPVATESY	GVQVATNHQSAQAQTGWVQNQ	GILPGMVWQNRDVYL
AAV9/hu	548	T--GRDNVDAD-KVMITNEEEIKTTNPVATESY	GVQVATNHQSAQAQTGWVQNQ	GILPGMVWQNRDVYL
hu. 31-F	548	T--GRDNVDAD-KVMITNEEEIKTTNPVATESY	GVQVATNHQSAQAQTGWVQNQ	GILPGMVWQNRDVYL

AAV5	604	QGPWAKIPETGAHFHSPAMGGFGLKHPPMMLIK	NTPVPGN-ITSFSDVPVSSFITQYSTGQVT	MEME
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AAV3-3 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTPVPANPPTTFSPAKFASFITQYSTGQVSVEIE
AAV4-4 613 QGPIWAKIPHTDGHFHPSPPLIGGFGLKHPPPPQIFIKNTPVPANPATTFSTPNSFITQYSTGQVSQID
AAV1-A 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKNPPPPQILIKNTPVPANPPAEFSATKFAFITQYSTGQVSVEIE
hu.46-A 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKNPPPPQILIKNTPVPANPPAEFSATKFAFITQYSAGQVSVEIE
hu.48-A 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKNPPPPQILIKNTPVPANPPAEFSATKFAFITQYSTGQVSVEIE
hu.44-A 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKNPPPPQILIKNTPVPANPPAEFSATKFAFITQYSTGQVSVEIE
hu.43-A 616 QGPIWAKIPHTDGHFHPSPMLGGFGLKNPPPPQILIKNTPVPANPPAEFSATKFAFITQYSTGQVSVEIE
AAV6-A 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPPAEFSATKFAFITQYSTGQVSVEIE
hu.34-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.47-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.29-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.63-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.56-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.45-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.57-B 613 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.35-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.58-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGRVSVEIE
hu.28-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.51-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.19-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.49-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.52-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.13-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
AAV2-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.20-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.24-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.64-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.27-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.21-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE
hu.22-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE

hu.23-B 614 RGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTVPANPSTTFSAAKFASFITQYSTGQVSVEIE
 hu.7-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.61-C 614 QGPIWAKIPHTDGHFHPSPVLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 rh.56-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.9-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.54-C 613 RGPIWAKIPHADGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.53-C 613 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.60-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.55-C 613 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.2-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.1-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.18-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.3-C 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKSTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.25-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.15-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.16-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.11-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.10-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.4-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 rh.54-D 616 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPANPPEVTPAKFASFITQYSTGQVSVEIE
 rh.48-D 616 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPANPPEVTPAKFASFITQYSTGQVSVEIE
 rh.55-D 616 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPANPPEVTPAKFASFITQYSTGQVSVEIE
 rh.62-D 616 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPANPPEVTPAKFASFITQYSTGQVSVEIE
 AAV7-D 616 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPANPPEVTPAKFASFITQYSTGQVSVEIE
 rh.52-E 617 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAALNSFITQYSTGQVSVEIE
 rh.51-E 617 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAALNSFITQYSTGQVSVEIE
 hu.39-E 617 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAALNSFIAQYSTGQVSVEIE
 rh.53-E 617 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAALNSFITQYSTGQVSVEIE
 hu.37-E 617 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAALASFITQYSTGQVSVEIE
 rh.43-E 615 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFNQSKLNSFITQYSTGQVSVEIE

FIG. 2AA

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rh. 50-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAKLNSFITQYSTGQVSVEIE
rh. 49-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAKLNSFITQYSTGQVSVEIE
rh. 61-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAKLNSFITQYSTGQVSVEIE
hu. 41-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
rh. 64-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAKLNSFITQYSTGQVSVEIV
hu. 42-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
rh. 57-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAKLNSFITQYSTGQVSAEIE
hu. 40-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
AAV8-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFNQSKLNSFITQYSTGQVSVEIE
rh. 58-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKSTVPADPPTAFNQAKLNSFITQYSTGQVSVEIE
rh. 40-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
hu. 67-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
hu. 17-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
hu. 6-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
hu. 66-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
rh. 38-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
hu. 32-F	615	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNKDKLNSFITQYSTGQVSVEIE
AAV9/hu	615	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNKDKLNSFITQYSTGQVSVEIE
hu. 31-F	615	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNKDKLNSFITQYSTGQVSVEIE

AAV5	673
AAV3-3	685	WELKENS KRWNPEIQYTN NYNDPQFVDFAPDSTGEYRTRPIGTRYLTRPL*
AAV4-4	683	WELQENS KRWNPEIQYTS NYNKS VNVDFTVD TNGVYSEPRPIGTRYLTRNL*
AAV1-A	685	WEIQERS KRWNPEVQFTSN YGQNSLLWAPDAAGKYTEPRAIGTRYLTHHL*
hu. 46-A	685	WELQENS KRWNPEVQYTS NYAKS ANVDFTVD NNGLYTEPRPIGTRYLTRPL*
hu. 48-A	685	WELQENS KRWNPEVQYTS NYAKS ANVDFTVD NNGLYTEPRPIGTRYLTRPL*
hu. 44-A	685	WELQENS KRWNPEVQYTS NYAKS ANVDFTVD NNGLYTEPRPIGTRYLTRPL*
hu. 43-A	686	WELQENS KRWNPEVQYTS NYAKS ASVDFTVD NNGLYTEPRPIGTRYLTRPL*

FIG. 2AB

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AAV6-A	685	WELQKENS	KRWNPEVQY	TSNYAKS	ANVDF	TVDN	NGLYTE	PRPIG	TRYLTRPL*
hu.34-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.47-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.29-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.63-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.56-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.45-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.57-B	683	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.35-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.58-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.28-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.51-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.19-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.49-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.52-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.13-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
AAV2-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.20-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	ARYLTRNL*
hu.24-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.64-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.27-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.21-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.22-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.23-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.7-C	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.61-C	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
rh.56-C	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.9-C	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.54-C	683	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.53-C	683	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*

FIG. 2AC

hu. 60-C 684 WELQENSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 hu. 55-C 683 WELQENSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 hu. 2-C 684 WELQENSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 hu. 1-C 684 WELQENSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 hu. 18-C 684 WELQENSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 hu. 3-C 685 WELQENSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 hu. 25-C 684 WELQENSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 hu. 15-C 684 WELQEDSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 hu. 16-C 684 WELQENSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 hu. 11-C 684 WELQENSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 hu. 10-C 684 WELQENSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 hu. 4-C 684 WELQENSKRWNPETQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL*
 rh. 54-D 686 WELQENSKRWNPETQYTSNFDKQTVGDFAVDSQGVYSEPRPIGTRYLTRNL*
 rh. 48-D 686 WELQENSKRWNPETQYTSNFDKQTVGDFAVDSQGVYSEPRPIGTRYLTRNL*
 rh. 55-D 686 WELQENSKRWNPETQYTSNFDKQTVGDFAVDSQGVYSEPRPIGTRYLTRNL*
 rh. 62-D 686 WELQENSKRWNPETQYTSNFDKQTVGDFAVDSQGVYSEPRPIGTRYLTRNL*
 AAV7-D 686 WELQENSKRWNPETQYTSNFEKQTVGDFAVDSQGVYSEPRPIGTRYLTRNL*
 rh. 52-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 rh. 51-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 hu. 39-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 rh. 53-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 hu. 37-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 rh. 43-E 685 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 rh. 50-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 rh. 49-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 rh. 61-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 hu. 41-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 rh. 64-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 hu. 42-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
 rh. 57-E 687 WELQENSKRWNPETQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*

FIG. 2AD

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hu.40-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
AAV8-E	687	WELQENSKRWNPEIQYTSNYYKSTVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh.58-E	687	WELQENSKCWNPEIQYTSNYYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh.40-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNSEGTYSEPRPIGTRYLTRNL*
hu.67-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.17-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.6-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.66-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
rh.38-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.32-F	685	WELQENSKRWNPEIQYTSNYYKSNNVEFAVNTEGVYSEPRPIGTRYLTRNL*
AAV9/hu	685	WELQENSKRWNPEIQYTSNYYKSNNVEFAVNTEGVYSEPRPIGTRYLTRNL*
hu.31-F	685	WELQENSKRWNPEIQYTSNYYKSNNVEFAVSTEGVYSEPRPIGTRYLTRNL*

FIG. 2AE

FIG. 3A

hu.27-B	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.21-B	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACCTCTCTGAAGGAATAAGACAGTGGTGG
hu.22-B	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.23-B	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.7-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.61-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
rh.56-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.9-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.54-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.53-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.60-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.55-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.2-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.1-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.18-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.3-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.25-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.15-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.16-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.11-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.10-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
hu.4-C	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGG
rh.54-D	1	ATGGCTGCTGACGGTTATCTTCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGG
rh.48-D	1	ATGGCTGCTGACGGTTATCTTCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGG
rh.55-D	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGG
rh.62-D	1	ATGGCTGCTGACGGTTATCTTCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGG
AAV7-D	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGG
rh.52-E	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGG
rh.51-E	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGG
hu.39-E	1	ATGGCTGCCGATGGTTATCTTCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGG

FIG. 3B

rh. 53-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	80	90	100	110	120	130	140
hu. 37-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG						
rh. 43-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	GCCTTGAAGCGGGCCACCCGAAACCCAAATCAGCAGCATCAAGATCAAGCCCGTGGTCTTGTGCT						
rh. 50-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	CTCTGAAACCTGGAGTCCCTCAACCCAAAGCGAACCAACACCAAGGACAAACCGTCGGGGTCTTGTGCT						
rh. 49-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	CGCTGCAACCTGGAGCCCCCTAAACCCAAAGGCAATCAACAACATCAGGACAAACGCTCGGGGTCTTGTGCT						
rh. 61-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	ACTTGAAACCTGGAGCCCCGAAAGCCCAAGCCCAACGAGGACGAGGACGCGGGGTCTGTGCT						
hu. 41-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	AGCTCAAAACCTGGCCCCACCAACCCAAAGCCCCGAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT						
rh. 64-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 42-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 57-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 40-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
AAV8-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 58-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 40-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 67-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 17-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 6-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 66-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 38-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 32-F	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
AAV9/hu	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 31-F	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							

FIG. 3C

hu. 48-A	71	ACTTGAAACCTGGAGCCCCGGAAGCCCAAGCCCAACCAAGCAAAAGCAGGACGACGGCCCGGGTCTGGTGCT
hu. 44-A	71	AGCTCAGACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 43-A	71	ACCTGAAACCTGGAGCCCCAAGCCCAAGGCCAACCAGCAGAAGCAGGACGACGGCCGGGTCTGGTGCT
AAV6-A	71	ACTTGAAACCTGGAGCCCCGGAAGCCCAAGCCCAACCAAGCAAAAGCAGGACGACGGCCCGGGTCTGGTGCT
hu. 34-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 47-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 29-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 63-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 56-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 45-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 57-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 35-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 58-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 28-B	71	AACTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 51-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 19-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 49-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 52-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 13-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
AAV2-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 20-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 24-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 64-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 27-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 21-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 22-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 23-B	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 7-C	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 61-C	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
rh. 56-C	71	AGCTCAAACCTGGCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT

FIG. 3D

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hu. 9-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATCAGGACAACAGCAGGGGTCTTGTGCT
hu. 54-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 53-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 60-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 55-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 2-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 1-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 18-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 3-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 25-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 15-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 16-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 11-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 10-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCTCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
hu. 4-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT
rh. 54-D	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
rh. 48-D	71	ACCTGAAACCTGGAGCCCCGAAAGCCCAAGGCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
rh. 55-D	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
rh. 62-D	71	ACCTGAAACCTGGAGCCCCGAAAGCCCAAGGCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
AAV7-D	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
rh. 52-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
rh. 51-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
hu. 39-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
rh. 53-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
hu. 37-E	71	ACCTGAAACCTGGAGCCCCGAAAGCCCAAGGCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
rh. 43-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
rh. 50-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
rh. 49-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
rh. 61-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGGCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT
hu. 41-E	71	ACCTGAAACCTGGAGCCCCGAAAGCCCAAGGCCAACCAGCAGAGCAGGACGACGAGGGGTCTTGTGCT

FIG. 3E

hu. 63-B	141	TCCTGGGTACAAGTACCTTGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 56-B	141	TCCTGGATACAAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 45-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 57-B	138	TCCTGGATACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 35-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 58-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 28-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 51-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 19-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 49-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 52-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 13-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
AAV2-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 20-B	141	TCCTGGGTACAGGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 24-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 64-B	141	TCCTGGGTACAAGTACCTTGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 27-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 21-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 22-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 23-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 7-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 61-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 56-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 9-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 54-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 53-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 60-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 55-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 2-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 1-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC

FIG. 3G

hu. 18-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 3-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 25-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 15-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCTACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 16-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCTACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 11-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 10-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 4-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 54-D	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 48-D	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 55-D	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 62-D	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
AAV7-D	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 52-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 51-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 39-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 53-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 37-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 43-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 50-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 49-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 61-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 41-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 64-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 42-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 57-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 40-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
AAV8-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 58-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 40-E	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC

FIG. 3H

hu. 67-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAATGCGGCGGACGCA	220	230	240	250	260	270	280
hu. 17-E	141	TCCTGGCTGCAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA						
hu. 6-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA							
hu. 66-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA							
rh. 38-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA							
hu. 32-F	141	TCCTGGGTACAAGTACCTCGGACCCCGCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGAGCAGACGCG							
AAV9/hu	141	TCCGGGTTACAATACCTTGGACCCCGCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGAGCAGACGCG							
hu. 31-F	141	TCCTGGGTACAAGTACCTCGGACCCCGCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGAGCAGACGCG							
AAV5	208	GTGCGCGAGAGCAGACATCTCGTACAAACGAGCAGCTTGAGGCGGGAGACAACCCCTACCTCAAGTACA							
AAV3-3	211	GCAGCCCTCGAACACGACAAAAGCTTACGACCAGCAGCTCAAGGCCGGTGACAACCCGTACCTCAAGTACA							
AAV4-4	208	GCAGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCAAGGCCGGTGACAACCCCTACCTCAAGTACA							
AAV1-A	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCAAGGCCGGTGACAATCCGTACCTGCGGTATA							
hu. 46-A	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 48-A	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCAAGGCCGGTGACAATCCGTACCTGCGGTATA							
hu. 44-A	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 43-A	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCAAGGCCGGTGACAATCCGTACCCCGGTATA							
AAV6-A	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCAAGGCCGGTGACAATCCGTACCTGCGGTATA							
hu. 34-B	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 47-B	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 29-B	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 63-B	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCCCAAGTACA							
hu. 56-B	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 45-B	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 57-B	208	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 35-B	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 58-B	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACG							
hu. 28-B	211	GCGGCCCTCGAGCAGCACAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							

hu. 51-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 19-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 49-B	211	GCGGCCCTCGAGTACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 52-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 13-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
AAV2-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 20-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 24-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGATAACCCGTACCTCAAGTACA
hu. 64-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACGGGAGACAACCCGTACCTCAAGTACA
hu. 27-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 21-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGATAACCCGTACCTCAAGTACA
hu. 22-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 23-B	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 7-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 61-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
rh. 56-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 9-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 54-C	211	GCGGCTCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 53-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 60-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 55-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 2-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 1-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 18-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGAAAGCGGAGACAACCCGTACCTCAAGTACA
hu. 3-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 25-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCAACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 15-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 16-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 11-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 10-C	211	GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA

hu. 4-C	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
rh. 54-D	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 48-D	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 55-D	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 62-D	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
AAV7-D	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 52-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 51-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 39-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 53-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 37-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 43-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 50-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 49-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 61-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 41-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 64-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 42-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 57-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 40-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
AAV8-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 58-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 40-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 67-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 17-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 6-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 66-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 38-E	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 32-F	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
AAV9/hu	211	GCGGCCCTCGAGCAGCAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA

FIG. 3K

hu.31-F 211 GCGGCCCTCGAGCACGACAAGGCCTACGACCAGCAGCTCAAGGCCGGAGACAACCCGTACCTCAAGTACA
 290 300 310 320 330 340 350
|.....|.....|.....|.....|.....|.....|.....|.....|.....|
 AAV5 278 ACCACGGGACGCCGAGTTTCAGGAGAAGCTCGCCGACGACACATCCTTCGGGGAAACCTCGGAAAGGC
 AAV3-3 281 ACCACGCCGACGCCGAGTTTCAGGAGCGTCTTCAAGAAGATACGTCTTTTGGGGGCAACCTTGGCAGAGC
 AAV4-4 278 ACCACGCCGACGCCGAGTTCCAGCAGCGGCTTCAGGGCGACACATCGTTTGGGGCAACCTCGGCAGAGC
 AAV1-A 281 ACCACGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC
 hu.46-A 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGGGC
 hu.48-A 281 ACCACGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC
 hu.44-A 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC
 hu.43-A 281 ACCACGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC
 AAV6-A 281 ACCACGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC
 hu.34-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.47-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.29-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.63-B 281 ACCACGCCGACGCCGAGTTCCAGGAGCGTCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.56-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.45-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.57-B 278 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.35-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.58-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.28-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.51-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.19-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.49-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.52-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.13-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 AAV2-B 281 ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC
 hu.20-B 281 ACCACGTCGACGCCGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCTTTTGGGGGCAACCTCGGACGAGC

FIG. 31

hu. 24-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCCCTTAAAGAGGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 64-B	281	ACCACGCCGACGCGGAGTTCCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 27-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 21-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 22-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 23-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 7-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 61-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 56-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 9-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 54-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 53-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 60-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 55-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 2-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 1-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 18-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 3-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 25-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 15-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 16-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 11-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 10-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 4-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 54-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 48-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 55-D	281	ATCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 62-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
AAV7-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 52-E	281	ATCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC

FIG. 3M

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rh. 51-E	281	ATCAGCCGACGCCGAGCTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC	360	370	380	390	400	410	420
hu. 39-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
rh. 53-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu. 37-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
rh. 43-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
rh. 50-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
rh. 49-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
rh. 61-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu. 41-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
rh. 64-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu. 42-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
rh. 57-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu. 40-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
AAV8-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
rh. 58-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
rh. 40-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu. 67-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu. 17-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu. 6-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu. 66-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
rh. 38-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu. 32-F	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
AAV9/hu	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu. 31-F	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
AAV5	348							
AAV3-3	351	AGTCTTTCAGGCCAAGAAAGGGTTCTCGAAACCTTTTGGC---CTGGTTGAAGAGGGTGCTAAGACGGCC							
AAV4-4	348	AGTCTTTCAGGCCAAGAAAGAGGATCCTTGAGCCTCTTGGT---CTGGTTGAGGAAGCAGCTAAAACGGCT							
	348	AGTCTTTCAGGCCAAGAAAGAGGGTTCTTGAAACCTCTTGGT---CTGGTTGAGCAAGCGGGTGAGACGGCT							

FIG. 3N

AAV1-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT
hu.46-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT
hu.48-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT
hu.44-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT
hu.43-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGCTGCTAAGACGGCT
AAV6-A	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTCGAACCTTTTGGT---	CTGGTTGAGGAAGGCTAAGACGGCT
hu.34-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTCGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.47-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGGGAACCTGTTAAGACGGCT
hu.29-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTGGAACCTCTGGGC---	CTGGTTGAGGAGCCTGTTAAGACGGCT
hu.63-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.56-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.45-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.57-B	348	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.35-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.58-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAGCCTGTTAAGACGGCT
hu.28-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTGGAACCTCTAGC---	CTGGTTGAGGAGCCTGTTAAGACGGCT
hu.51-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGGGAACCTGTTAAGACGGCT
hu.19-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.49-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.52-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGGGAACCTGTTAAGACGGCT
hu.13-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAGCCTGTTAAACGGCT
AAV2-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.20-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGCGGGCT
hu.24-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.64-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.27-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.21-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.22-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.23-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.7-C	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAGCCTGTTAAGACGGCT

FIG. 30

hu. 61-C	351	AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAAACGGCT
rh. 56-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 9-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 54-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 53-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 60-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 55-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 2-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 1-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 18-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 3-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 25-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 15-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 16-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 11-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 10-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 4-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
rh. 54-D	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
rh. 48-D	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
rh. 55-D	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
rh. 62-D	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
AAV7-D	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
rh. 52-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
rh. 51-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 39-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
rh. 53-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
hu. 37-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
rh. 43-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
rh. 50-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT
rh. 49-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTAAAGACGGCT

FIG. 3B

rh. 61-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu. 41-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
rh. 64-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu. 42-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
rh. 57-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu. 40-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
AAV8-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
rh. 58-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
rh. 40-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu. 67-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu. 17-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu. 6-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu. 66-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
rh. 38-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu. 32-F	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
AAV9/hu	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu. 31-F	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---

FIG. 3Q

		430	440	450	460	470	480	490
							
AAV5	415	CCTACCGGAAAGCGGATAGACGACCACTTCCA-----						AAAA
AAV3-3_	418	CCTGGAAAGAGGGGCTGTAGATCAGTCTCCTCAG---						GAAACCGGACTCATCTGGTGTGGCAAAT
AAV4-4_	415	CCTGGAAAGAGAGACCGTTGATTGAATCCCCCAG---						CAGCCCCGACTCCTCCACGGGTATCGGCAAAA
AAV1-A_	418	CCTGGAAAGAAACGTCGGGTAGAGCAGTCGCCACAA---						GAGCCAGACTCCTCCTCGGGCATCGGCAAGA
hu. 46-A	418	CCTGGAAAGAAACGTCGGGTAGAGCAGTCGCCACAA---						GAGCCAGACTCCCCCTCGGGCATCGGCAAGA
hu. 48-A	418	CCTGGAAAGAAACGTCGGGTAGAGCAGTCGCCACAA---						GAGCCAGACTCCTCCTCGGGCATCGGCAAGA
hu. 44-A	418	CCTGGAAAGAAACGTCGGGTAGAGCAGTCGCCACAA---						GGGCCAGACTCCTCCTCGGGCATCGGCAAGA
hu. 43-A	418	CCTGGAAAGAGACCGGTAGAACCGTCACCTCAGCGTTCC						CCCCGACTCCTCCACGGGCAATCGGCAAGA
AAV6-A	418	CCTGGAAAGAAACGTCGGGTAGAGCAGTCGCCACAA---						GAGCCAGACTCCTCCTCGGGCATCGGCAAGA
hu. 34-B	418	CCGGGAAAAAAGAGCGCGGTAGAGCACTCTCCTGTG---						GAGCCAGACTCCTCCTCGGGAAACCGGAAAGG

hu. 47-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGGAAACCGGAAAGG
hu. 29-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCA---GAGCCAGATTCTCTCTCGGAACTGGAAAGT
hu. 63-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 56-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 45-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAGG
hu. 57-B	415	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 35-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAGG
hu. 58-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 28-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCCGCA---GAGCCAGATTCTCTCTCCGAACTGGAAAGT
hu. 51-B	418	CCAGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAGG
hu. 19-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 49-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACAGGAAAG
hu. 52-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAGG
hu. 13-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
AAV2-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAGG
hu. 20-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 24-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 64-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 27-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 21-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 22-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 23-B	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 7-C	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 61-C	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
rh. 56-C	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 9-C	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 54-C	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 53-C	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 60-C	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG
hu. 55-C	418	CCGGGAAAAAGAGGCCGGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG

hu.2-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAAAG
hu.1-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAAAG
hu.18-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAAAG
hu.3-C	421	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAAAG
hu.25-C	418	CCGGGAAAAAGAGACCGGTAGAGCACTCTCTGCG---GAGCCAGACTCCTCTCGGGAACCGGAAAAAG
hu.15-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAAAG
hu.16-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAAAG
hu.11-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAAAG
hu.10-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAAAG
hu.4-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAAAG
rh.54-D	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.48-D	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.55-D	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCAACACAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.62-D	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
AAV7-D	418	CCTGCAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.52-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCAACACAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.51-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCAACACAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.39-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCAACACAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.53-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCAACACAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.37-E	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.43-E	418	CCTGGAAAGAAAGAGACCCAGTAGAGCAGTCAACCCAA---GAACCAGACTCCTCTCGGGCATCGGCAAGA
rh.50-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCAACACAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.49-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCAACACAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.61-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCAACACAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.41-E	418	CCTGGAAAGAAAGAGACCGGTAGAACCGCCACCTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.64-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCAACACAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.42-E	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.57-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCAACACAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.40-E	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
AAV8-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCATCAACCCAGCGTTCTCCAGACTCCTCTACGGGCATCGGCAAGA

rh. 58-E	418	CCTGGAAGAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCGACTCCTCCACGGGCATCGGCAAGA	500	510	520	530	540	550	560
rh. 40-E	418	CCTGGAAGAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCGACTCCTCCACGGGCATCGGCAAGA						
hu. 67-E	418	CCTGGAAGAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCGACTCCTCCACGGGCATCGGCAAGA							
hu. 17-E	418	CCTGGAAGAAGAGACCGGTAGAGCCATCACCCAGCGTTCTCCAGACTCCTCTACGGGCATCGGCAAGA							
hu. 6-E	418	CCTGGAAGAAGAGACCGGTAGAGCCATCACCCAGCGTTCTCCAGACTCCTCTACGGGCATCGGCAAGA							
hu. 66-E	418	CCTGGAAGAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCGACTCCTCCACGGGCATCGGCAAGA							
rh. 38-E	418	CCTGGAAGAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCGACTCCTCCACGGGCATCGGCAAGA							
hu. 32-F	418	CCTGGAAGAAGAGAGGCTGTAGAGCAGTCTCCTCAG---GAACCGGACTCCTCCGCGGGTATTGGCAAAAT							
AAV9/hu	418	CCTGGAAGAAGAGAGGCTGTAGAGCAGTCTCCTCAG---GAACCGGACTCCTCCGCGGGTATTGGCAAAAT							
hu. 31-F	418	CCTGGAAGAAGAGAGGCTGTAGAGCAGTCTCCTCAG---GAACCGGACTCCTCCGCGGGTATTGGCAAAAT							
AAV5	452	GAAGAAGGCTCGGACCGAAGAGGACTCCAAAGCCTTCCACCTCGTCAGACGCCGGAAGCTGGACCCAGCGG						
AAV3-3	485	CGGCCAAACAGCCTGCCAGAAAAGACTAAATTTTCGGTCAGACTGGAGACTCAGAGTCAGTCCCAGAC--							
AAV4-4	482	AAGGCAAGCAGCGGCTAAAAGAGCTCGTTTTCGAAGACGAAACTGGAGCAGGCGACGGACCC-----							
AAV1-A	485	CAGGCCAGCAGCCCCGCTAAAAGAGACTCAATTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAT--							
hu. 46-A	485	CAGGCCAGCAGCCCCGCTAAAAGAGACTCAATTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAT--							
hu. 48-A	485	CAGGCCAGCAGCCCCGCTAAAAGAGACTCAATTTTGGCCAGACTGGCGACTCAGAGTCAGTCCCCGAT--							
hu. 44-A	485	CAGGCCAGCAGCCCCGCTAAAAGAGACTCAATTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAT--							
hu. 43-A	488	AAGGCCAGCAGCCCCGCTAAAAGAGACTGAACTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--							
AAV6-A	485	CAGGCCAGCAGCCCCGCTAAAAGAGACTCAATTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--							
hu. 34-B	485	CGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--							
hu. 47-B	485	CGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--							
hu. 29-B	485	CGGGCAACCAGCCTGCAAGAAAAGATTGAATTTTCCGTCAGACTGGAGACTCAGACTCCGTACCTGAC--							
hu. 63-B	485	CGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCCGTCAGACTGGAGACGCAGACTCCGTACCTGAC--							
hu. 56-B	485	CGGGCAACCAGCCTGCAAGAAAAGATTGAATTTTCCGTCAGACTGGAGACGCAGACTCCGTACCTGAC--							
hu. 45-B	485	CGGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--							
hu. 57-B	482	CGGGCAACCAGCCTGCAAGAAAAGATTGAATTTTCCGTCAGACTGGAGACGCAGACTCCGTACCTGAC--							
hu. 35-B	485	CGGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--							

FIG. 3F

hu.58-B 485 CCGGCAACCGCCTGCAAGAAAGAGATTGAATTTCCGGTCAGACTGGAGACGCAGACTCCCGTACCTGAC--
 hu.28-B 485 CCGGCAACCGCCTGCAAGAAAGAGATTGAATTTCCGGTCAGACTGGAGACTCAGACTCCGTACCTGAC--
 hu.51-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu.19-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGCCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu.49-B 485 CCGGCCAGCAGCCTGCGAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu.52-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu.13-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 AAV2-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu.20-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu.24-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu.64-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.27-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu.21-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu.22-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu.23-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu.7-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.61-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 rh.56-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.9-C 485 CCGGCCATCAGCCTGCGAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.54-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.53-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.60-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.55-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.2-C 485 CCGGCCAGCGGCCCTGCAAGAAAAGATTAAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.1-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTAAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.18-C 485 CCGGCCAGCAGCCTGCGAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.3-C 488 CCGGCCAGCAGCCTGCAAGAAAAGATTAAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.25-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.15-C 485 CCGGCAACCGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.16-C 485 CCGGCAACCGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--

FIG. 3U

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hu.32-F	485	CGGGTTACAGCCCGCTAAAAAGAACTCAATTTCCGTCCAGACTGGCGACACAGAGTCAGTCCCCGAC--	570	580	590	600	610	620	630
AAV9/hu	485	CGGGTGCACAGCCCGCTAAAAAGAGACTCAATTTCCGTCCAGACTGGCGACACAGAGTCAGTCCCCGAC--							
hu.31-F	485	CGGGTTACAGCCCGCTAAAAAGAACTCAATTTCCGTCCAGACTGGCGACACAGAGTCAGTCCCCGAC--							
								
AAV5	522	ATCCCAGCAGCTGCAAAATCCCAGCCCCAACCCAGCCTCAAGTTTGGAGCTGATACAAATGTCTCGGGAGGTT							
AAV3-3	552	-CCTCAACCTCTCGGAGAACCAACAGCAGCCCCCACAAGTTTGGGATCTAATAACAATGGCTTCAGGCGGT							
AAV4-4	546	-----CCTGAGGGATCAACTTCCGGAGCCAATGTCT-----GATGACAGTGAGATGCGTGCAGCAGCT							
AAV1-A	552	-CCACAACCTCTCGGAGAACCTCCAGCAACCCCCCGTGTGTGGACCTACTACAATGGCTTCAGGCGGT							
hu.46-A	552	-CCACAACCTCTCGGAGAACCTCCAGCAACCCCCCGTGTGTGGACCTACTACAATGGCTTCAGGCGGT							
hu.48-A	552	-CCACAACCTCTCGGAGAACCTCCAGCAACCCCCCGTGTGTGGACCTACTACAATGGCTTCAGGCGGT							
hu.44-A	552	-CCACAACCTCTCGGAGAACCTCCAGCAACCCCCCGTGTGTGGACCTACTACAATGGCTTCAGGCGGT							
hu.43-A	555	-CCTCAACCAATCGGAGAACCAACAGCAGGCCCTCTGTGGTCTGGGATCTGGTACAAATGGCTGCAGGCGGT							
AAV6-A	552	-CCACAACCTCTCGGAGAACCTCCAGCAACCCCCCGTGTGTGGACCTACTACAATGGCTTCAGGCGGT							
hu.34-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.47-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.29-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.63-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.56-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.45-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.57-B	549	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.35-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.58-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.28-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.51-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.19-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTTCAGGCAGT							
hu.49-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTTCAGGCAGT							
hu.52-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTTCAGGCAGT							
hu.13-B	552	-CCCCAGCCTCTCGGACAGCCACAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTTCAGGCAGT							

FIG. 3W

AAV2-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 20-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 24-B	552	-CCCCGGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 64-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 27-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 21-B	552	-CCCCGGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 22-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 23-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 7-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 61-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
rh. 56-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 9-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 54-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 53-C	552	-CCCCAGCCTCTCAGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 60-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 55-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 2-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 1-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 18-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 3-C	555	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 25-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 15-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 16-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 11-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 10-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
hu. 4-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
rh. 54-D	555	-CCTCAACCTCTCGGAGAACCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
rh. 48-D	555	-CCTCAACCTCTCGGAGAACCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
rh. 55-D	555	-CCTCAACCTCTCGGAGAACCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT
rh. 62-D	555	-CCTCAACCTCTCGGAGAACCCACCAGCAGCCCCCTCTGGTCTGGGAACATAACGATGGCTACAGGCAGT

FIG. 3X

AAV3-3	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
AAV4-4	604	GGCGAGTCAGTCGAGGGCGGACAAAGTGCCGATGGAGTGGGTAATGCCCTCGGTGATTGGCATTGCG
AAV1-A	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.46-A	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.48-A	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.44-A	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.43-A	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
AAV6-A	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.34-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.47-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.29-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.63-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.56-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.45-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.57-B	619	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.35-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.58-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.28-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.51-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.19-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.49-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.52-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.13-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
AAV2-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.20-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.24-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.64-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.27-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.21-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
hu.22-B	622	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG

hu. 23-B	622	GGCGACCAATGGCAGACAATAACGAGGGGCCGACGGAGTGGTAATTCCTCGGGAAATTGGCATTGCG
hu. 7-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 61-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCGGGAAATTGGCATTGCG
rh. 56-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 9-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 54-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 53-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 60-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 55-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 2-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 1-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 18-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 3-C	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 25-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 15-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 16-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 11-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 10-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 4-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 54-D	625	GGCGTCCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 48-D	625	GGCGACCAATGGCTGACAATAACGAGGGTGCCGACGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 55-D	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 62-D	625	GGCGACCAATGGCTGACAATAACGAGGGTGCCGACGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
AAV7-D	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 52-E	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 51-E	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 39-E	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 53-E	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 37-E	625	GGCGTCCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 43-E	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGTAATTCCTCAGGAAATTGGCATTGCG

FIG. 3AA

rh. 50-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCGGGAAATTGGCATTGCG	710	720	730	740	750	760	770
rh. 49-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCGGGAAATTGGCATTGCG						
rh. 61-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCGGGAAATTGGCATTGCG	ATTCACGTGGATGGGGACAGAGTCGTACCAAGTCCACCCGAACTGGGTGCTGCCCAGCTACAACAA						
hu. 41-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG	ATCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCAAGAACCTGGGCCCTGCCCACTACAACAA						
rh. 64-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG	ATTCACCTGGTCTAGGGCCACGTACGACACCAACAGCACCAAGAACCTGGGTCTTGGCCACCTACAACAA						
hu. 42-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA						
rh. 57-E	625	GGCGGCCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA						
hu. 40-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA						
AAV8-E	625	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA						
rh. 58-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG							
rh. 40-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG							
hu. 67-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG							
hu. 17-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG							
hu. 6-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG							
hu. 66-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG							
rh. 38-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTGCG							
hu. 32-F	622	GGCGACCAATGGCAGACAATAACGAAGGTGCCGATGGAGTGGGTAGTTCCTCGGGAAATTGGCATTGCG							
AAV9/hu	622	GGCGACCAATGGCAGACAATAACGAAGGTGCCGATGGAGTGGGTAGTTCCTCGGGAAATTGGCATTGCG							
hu. 31-F	622	GGCGACCAATGGCAGACAATAACGAAGGTGCCGATGGAGTGGGTAGTTCCTCGGGAAATTGGCATTGCG							
AAV5	662	ATTCACGTGGATGGGGACAGAGTCGTACCAAGTCCACCCGAACTGGGTGCTGCCCAGCTACAACAA							
AAV3-3	692	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCAAGAACCTGGGTCTTGGCCACCTACAACAA							
AAV4-4	674	ATTCACCTGGTCTAGGGCCACGTACGACACCAACAGCACCAAGAACCTGGGTCTTGGCCACCTACAACAA							
AAV1-A	692	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA							
hu. 46-A	692	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA							
hu. 48-A	692	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA							
hu. 44-A	692	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA							
hu. 43-A	695	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA							

FIG. 3AB

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AAV6-A	692	ATTCCACATGGCTGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACATGGGCCTTG	CCCCACCTATAACAA
hu.34-B	692	ATTCCACATGGATGGCGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.47-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.29-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.63-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCTCTG	CCCCACCTACAACAA
hu.56-B	692	ATTCCACATGGATGGCGGACAGAGTCG	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.45-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.57-B	689	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.35-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.58-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCTCTG	CCCCACCTACAACAA
hu.28-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.51-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.19-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.49-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCTCTG	CCCCACCTACAACAA
hu.52-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.13-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
AAV2-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.20-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.24-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.64-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCTCTG	CCCCACCTACAACAA
hu.27-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.21-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.22-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.23-B	692	ATTCCACATGGATGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTGCAACAA
hu.7-C	692	ATCCCCAATGGCTGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.61-C	692	ATCCCCAATGGCTGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
rh.56-C	692	ATCCCCAATGGCTGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.9-C	692	ATCCCCAATGGCTGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.54-C	692	ATCCCCAATGGCTGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA
hu.53-C	692	ATCCCCAATGGCTGGCGGACAGAGTCA	TACCA	CCAGCACCCGGAACCTGGGCCCTG	CCCCACCTACAACAA

FIG. 3AC

hu. 60-C	692	ATTTCCCAATGGCTGGCGACAGAGT	CATCACCACCGACCCGCACTGGGCCCTGCCCCACCTACAACAA
hu. 55-C	692	ATTTCCCAATGGCTGGCGACAGAGT	CATCACCACCGACCCGAACTGGGCCCTGCCCCACCTACAACAA
hu. 2-C	692	ATTTCCCAATGGCTGGCGACAGAGT	CATCACCACCGACCCGAACTGGGCCCTGCCCCACATACAACAA
hu. 1-C	692	ATTTCCCAATGGCTGGCGACAGAGT	CATCACCACCGACCCGAACTGGGCCCTGCCCCACATACAACAA
hu. 18-C	692	ATTTCCCAATGGCTGGCGACAGAGT	CATCACCACCGACCCGAACTGGGCCCTGCCCCACCTACAACAA
hu. 3-C	695	ATTTCCCAATGGCTGGCGACAGAGT	CATCGCCACCGACCCGAACTGGGCCCTGCCCCACATACAACAA
hu. 25-C	692	ATTTCCCAATGGCTGGCGACAGAGT	CATCACCACAGCACTCGAACTGGGCCCTGCCCCACCTACAACAA
hu. 15-C	692	ATTTCCCAATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCTCTGGCCACCTACAATAA
hu. 16-C	692	ATTTCCCAATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCTCTGGCCACCTACAACAA
hu. 11-C	692	ATTTCCCAATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCTCTGGCCACCTACAACAA
hu. 10-C	692	ATTTCCCAATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
hu. 4-C	692	ATTTCCCAATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACATACAACAA
rh. 54-D	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCTTTGGCCACCTACAACAA
rh. 48-D	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCTTTGGCCACCTACAACAA
rh. 55-D	695	ATTTCCACACGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCTTTGGCCACCTACAACAA
rh. 62-D	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCTTTGGCCACCTACAACAA
AAV7-D	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
rh. 52-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
rh. 51-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
hu. 39-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
rh. 53-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
hu. 37-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
rh. 43-E	692	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
rh. 50-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
rh. 49-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
rh. 61-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
hu. 41-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
rh. 64-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
hu. 42-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA
rh. 57-E	695	ATTTCCACATGGCTGGCGACAGAGT	CATCACCACAGCACTGGGCCCTGCCCCACCTACAACAA

FIG. 3AD

	780	790	800	810	820	830	840
hu.40-E	ATTCCACATGGCTGGCGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
AAV8-E	ATTCCACATGGCTGGCGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
rh.58-E	ATTCCACATGGCTGGCGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
rh.40-E	ATTCCACATGGCTGGCGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
hu.67-E	ATTCCACATGGCTGGCGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
hu.17-E	ATTCCACATGGCTGGCGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
hu.6-E	ATTCCGATGGCTGGCGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
hu.66-E	ATTCCACATGGCTGGCGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
rh.38-E	ATTCCACATGGCTGGCGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
hu.32-F	ATTCCCAATGGCTGGGGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
AAV9/hu	ATTCCCAATGGCTGGGGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
hu.31-F	ATTCCCAATGGCTGGGGACAGAGTCA	TACCA	CCAGCACCCGAA	CCTGGG	CCCTG	CCCACTACA	CAAA
AAV5	CCACAGTACCGAGATCAAAAGC---	GGCTCCGTCGACGGAA	GCAGCAACGCCAA	CGCCTACTTTGGGATAC			
AAV3-3-	CCATCTCTACAAGCAAAATCTCC---	AGCCAATCAGGAGCTT	CAAAACGACAAACCAC	TACTTTGGCTAC			
AAV4-4-	CCACCTCTACAAGCGACTCGGA---	-----	GAGAGCCTGCAGTCCA	ACACCTACAACGGATTCT			
AAV1-A-	CCACCTCTACAAGCAAAATCTCCAGT---	GCTTCAACGGGGGCCAG	CAACGACAAACCAC	TACTTCGGCTAC			
hu.46-A	CCACCTCTACAAGCAAAATCTCCAGT---	GCTTCAACGGGGGCCAG	CAACGACAAACCAC	TACTTCGGCTAC			
hu.48-A	CCACCTCTACAAGCAAAATCTCCAGT---	ACTTCAACGGGGGCCAG	CAACGACAAACCAC	TACTTCGGCTAC			
hu.44-A	CCACCTCTACAAGCAAAATCTCCAGT---	GCTTCAACGGGGGCCAG	CAACGACAAACCAC	TACTTCGGCTAC			
hu.43-A	CCACCTCTACAAGCAAAATCTCCAGT---	GCTTCAACGGGGGCCAG	CAACGACAAACCAC	TACTTCGGCTAC			
AAV6-A	CCACCTCTACAAGCAAAATCTCCAGT---	GCTTCAACGGGGGCCAG	CAACGACAAACCAC	TACTTCGGCTAC			
hu.34-B	CCACCTCTACAAGCAAAATTTCC---	AGCCAATCAGGAGCCTC	GAACGACAAATCACT	ACTTTGGCTAC			
hu.47-B	CCACCTCTACAAGCAAAATTTCC---	AGCCAATCAGGAGCCTC	GAACGACAAATCACT	ACTTTGGCTAC			
hu.29-B	CCATCTGTACAAGCAAAATATCC---	AGCCAGTCTGGAGCCAG	CAACGACAAATCACT	ACTTTGGCTAC			
hu.63-B	CCACCTCTACAAGCAGATTTC---	AGCCAATCAGGAGCCTC	AAACGACAAACCAC	TACTTTGGCTAC			
hu.56-B	CCACCTCTACAAGCAGATTTC---	AGCCAATCAGGAGCCAG	CAACGACAAACCAC	TACTTTGGCTAC			
hu.45-B	CCACCTCTACAAGCAAAATTTCC---	AGCCAATCAGGAGCCTC	GAACGACAAATCACT	ACTTTGGCTAC			

FIG. 3AE

hu. 57-B	759	CCACCTCTACAAGCAGATTTC	-----AGCCAATCAGGAGCCAGCAATGACAACCACTACTTTGGCTAC
hu. 35-B	762	CCACCTCTACAAACAAATTTC	-----AGCCAATCAGGAGCCTCGAACGACAAATCACTACTTTGGCTAC
hu. 58-B	762	CCATCTGTACAAGCAGATTTC	-----AGCCAATCAGGAGCCAGCAACGACAACTACTTTGGCTAC
hu. 28-B	762	CCATCTGTACAAGCAAATATTC	-----AGCCAGTCTGGAGCCAGCAACGACAAATCACTACTTTGGCTAC
hu. 51-B	762	CCACCTCTACAAACAAATTTC	-----AGCCAATCAGGAGCCTCGAACGACAAATCACTACTTTGGCTAC
hu. 19-B	762	CCATCTGTACAAGCAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACTACTTTGGCTAC
hu. 49-B	762	CCATCTGTACAAGCAGATCTCC	-----AGCCAATCAGGAGCCAGCAACGACAACTACTTTGGCTAC
hu. 52-B	762	CCACCTCTACAGACAAATTTCC	-----AGCCAATCAGGAGCCTCGAACGACAAATCACTACTTTGGCTAC
hu. 13-B	762	CCATCTCTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCAGCAACGACAACTACTTTGGCTAC
AAV2-B	762	CCACCTCTACAAACAAATTTC	-----AGCCAATCAGGAGCCTCGAACGACAAATCACTACTTTGGCTAC
hu. 20-B	762	CCATCTGTACAAGCAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACTACTTTGGCTAC
hu. 24-B	762	CCATCTGTACAAGCAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACTACTTTGGCTAC
hu. 64-B	762	CCACCTCTACAGGCAGATTTC	-----AGCCAATCAGGAGCCTCAAACGACAACTACTTTGGCTAC
hu. 27-B	762	CCATCTGTACAAGCAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACTACTTTGGCTAC
hu. 21-B	762	CCATCTGTACAAGCAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACTACTTTGGCTAC
hu. 22-B	762	CCATCTGTACAAGCAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACTACTTTGGCTAC
hu. 23-B	762	CCATCTGTACAAGCAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACTACTTTGGCTAC
hu. 7-C	762	CCACCTCTACAAGCAAATCTCA	-----AGCCAATCAGGAGCCTCAAACGACAACTACTTTGGCTAC
hu. 61-C	762	CCACCTCTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACTACTTTGGCTAC
rh. 56-C	762	CCACCTCTACAAGCAAATCTCA	-----AGCCAATCAGGAGCCTCAAACGACAACTACTTTGGCTAC
hu. 9-C	762	CCACCTCTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCTCGAACGACAACTACTTTGGCTGC
hu. 54-C	762	CCACCTTTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACTACTTTGGCTAC
hu. 53-C	762	CCACCTTTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACTACTTTGGCTAC
hu. 60-C	762	CCACCTCTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACTACTTTGGCTAC
hu. 55-C	762	CCACCTTTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACTACTTTGGCTAC
hu. 2-C	762	CCACCTCTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCAGCAACGACAACTACTTTGGCTAC
hu. 1-C	762	CCACCTCTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCAGCAACGACAACTACTTTGGCTAC
hu. 18-C	762	CCACCTCTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACTACTTTGGCTAC
hu. 3-C	765	CCACCTCTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCTCGAACGACAACTACTTTGGCTAC
hu. 25-C	762	CCACCTCTACAAGCAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACTACTTTGGCTAC

FIG. 3AF

hu.15-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.16-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.11-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
hu.10-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
hu.4-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
rh.54-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCAACGACAACCACTACTTTGGCTAC
rh.48-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCAACGACAACCACTACTTTGGCTAC
rh.55-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCAACGACAACCACTACTTTGGCTAC
rh.62-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCAACGACAACCACTACTTTGGCTAC
AAV7-D	765	CCACCTCTACAAGCAAATCTCCAGT---GAACTGCAGGTAGTACCAACGACAACCACTACTTTGGCTAC
rh.52-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.51-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
hu.39-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.53-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
hu.37-E	765	CCACCTCTACAAGCAAATCTCCAATGGGACATCGGGAGGAAGCACCAACGACAACCACTACTTTGGCTAC
rh.43-E	762	CCACCTCTACAAGCAAATCTCCAACGGGACATCGGGAGGAGCCACCAACGACAACCACTACTTTGGCTAC
rh.50-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.49-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.61-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
hu.41-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCAACGACAACCACTACTTTGGCTAC
rh.64-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
hu.42-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCAACGACAACCACTACTTTGGCTAC
rh.57-E	765	CCACCTCTACAAGCAAACCTCCAACGGGACCTCGGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
hu.40-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCAACGACAACCACTACTTTGGCTAC
AAV8-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.58-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.40-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCAACGACAACCACTACTTTGGCTAC
hu.67-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCAACGACAACCACTACTTTGGCTAC
hu.17-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACATCGGGAGGAAGCACCAACGACAACCACTACTTTGGCTAC
hu.6-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACATCGGGAGGAAGCACCAACGACAACCACTACTTTGGCTAC

FIG. 3AG

hu.66-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCACCAACGACACACCTACTTCGGCTAC	850	860	870	880	890	900	910
rh.38-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCACCAACGACACACCTACTTCGGCTAC							
hu.32-F	762	TCACCTCTACAAGCAAATCTCCAACAGCACATCTGGAGGATCTTCAAATGACAACGCCCTACTTCGGCTAC							
AAV9/hu	762	TCACCTCTACAAGCAAATCTCCAACAGCACATCTGGAGGATCTTCAAATGACAACGCCCTACTTCGGCTAC							
hu.31-F	762	TCACCTCTACAAGCAAATCTCCAACAGCACATCTGGAGGATCTTCAAATGACAACGCCCTACTTCGGCTAC							
AAV5	799							
AAV3-3	826	AGCACCCCTTGGGGTACTTTGACTTTAACCGCTTCCACAGCCACTGGAGCCCCCGAGACTGGCAAAGAC							
AAV4-4	799	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
AAV1-A	829	TCCACCCCTTGGGGTACTTTGACTTCAACCGCTTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu.46-A	829	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAGCGAC							
hu.48-A	829	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAGCGAC							
hu.44-A	829	GGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAGCGAC							
hu.43-A	832	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAGCGAC							
AAV6-A	829	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTCTCACCACGTGACTGGCAGCGAC							
hu.34-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.47-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.29-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.63-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.56-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.45-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.57-B	823	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.35-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.58-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.28-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.51-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.19-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTCTCCCCACGTGACTGGCAAAGAC							
hu.49-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							

FIG. 3AH

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hu. 52-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 13-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
AAV2-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 20-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 24-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 64-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 27-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 21-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 22-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 23-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 7-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 61-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
rh. 56-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 9-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 54-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 53-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 60-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 55-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 2-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 1-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 18-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 3-C	829	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 25-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 15-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 16-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 11-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 10-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 4-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
rh. 54-D	832	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
rh. 48-D	832	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC

FIG. 3A1

rh. 55-D	832	AGACCCCCCTGGGGGTATTTT	920
rh. 62-D	832	AGACCCCCCTGGGGGTATTTT	930
AAV7-D	832	AGACCCCCCTGGGGGTATTTT	940
rh. 52-E	835	AGACCCCCCTGGGGGTATTTT	950
rh. 51-E	835	AGACCCCCCTGGGGGTATTTT	960
hu. 39-E	835	AGACCCCCCTGGGGGTATTTT	970
rh. 53-E	835	AGACCCCCCTGGGGGTATTTT	980
hu. 37-E	835	AGACCCCCCTGGGGGTATTTT	
rh. 43-E	832	AGACCCCCCTGGGGGTATTTT	
rh. 50-E	835	AGACCCCCCTGGGGGTATTTT	
rh. 49-E	835	AGACCCCCCTGGGGGTATTTT	
rh. 61-E	835	AGACCCCCCTGGGGGTATTTT	
hu. 41-E	835	AGACCCCCCTGGGGGTATTTT	
rh. 64-E	835	AGACCCCCCTGGGGGTATTTT	
hu. 42-E	835	AGACCCCCCTGGGGGTATTTT	
rh. 57-E	835	AGACCCCCCTGGGGGTATTTT	
hu. 40-E	835	AGACCCCCCTGGGGGTATTTT	
AAV8-E	835	AGACCCCCCTGGGGGTATTTT	
rh. 58-E	835	AGACCCCCCTGGGGGTATTTT	
rh. 40-E	835	AGACCCCCCTGGGGGTATTTT	
hu. 67-E	835	AGACCCCCCTGGGGGTATTTT	
hu. 17-E	835	AGACCCCCCTGGGGGTATTTT	
hu. 6-E	835	AGACCCCCCTGGGGGTATTTT	
hu. 66-E	835	AGACCCCCCTGGGGGTATTTT	
rh. 38-E	835	AGACCCCCCTGGGGGTATTTT	
hu. 32-F	832	AGACCCCCCTGGGGGTATTTT	
AAV9/hu	832	AGACCCCCCTGGGGGTATTTT	
hu. 31-F	832	AGACCCCCCTGGGGGTATTTT	

FIG. 3AJ

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AAV5	869	TCATCAACAACACTAGGGGCTTCAGACCCCGGTCCCTCAGAGTCAAAAATCTTCAACATTCAAGTCAAAGA
AAV3-3	896	TCAATTAACAACAACACTGGGGATTCCGGGCCAAGAAACTCAGCTTCAAGCTCTTCAACATCCAAGTTAGAGG
AAV4-4	869	TCATCAACAACAACACTGGGCATCGACCCCAAAGCCATGCGGTCAAAAATCTTCAACATCCAGGTCAAAGGA
AAV1-A	899	TCATCAACAACAATTTGGGGATTCCGGCCC AAGAGACTCAACTTCAAACTCTTCAACATCCAAGTCAAAGGA
hu.46-A	899	TCATCAACAACAATTTGGGGATTCCGGCCC AAGAGACTCAACTTCAAACTCTTCAACATCCAAGTCAAAGGA
hu.48-A	899	TCATCAACAACAATTTGGGGATTCCGGCCC AAGAGACTCAACTTCAAACTCTTCAACATCCAAGTCAAAGGA
hu.44-A	899	TCATCAACAACAATTTGGGGATTCCGGCCC AAGAGACTCAACTTCAAACTCTTCAACATCCAAGTCAAAGGA
hu.43-A	902	TCATCAACAACAATTTGGGGATTCCGGCCC AAGAGACTCAACTTCAAACTCTTCAACATCCAAGTCAAAGGA
AAV6-A	899	TCATCAACAACAATTTGGGGATTCCGGCCC AAGAGACTCAACTTCAAGCTCTTCAACATCCAAGTCAAAGGA
hu.34-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.47-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.29-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.63-B	896	TCATCAACAACAATTTGGGGATTCCGGCCCCAAAAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGGA
hu.56-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAAAGACTCAACTTCAAGCTGTTTAAACATTTCAAGTCAAAGGA
hu.45-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.57-B	893	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.35-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.58-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.28-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.51-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.19-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.49-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGGA
hu.52-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.13-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
AAV2-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.20-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.24-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.64-B	896	TCATCAACAACAATTTGGGGATTCCGGCCCCAAAAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGGA
hu.27-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTTCAAGTCAAAGA

FIG. 3AK

hu. 21-B	896	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 22-B	896	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 23-B	896	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 7-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 61-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
rh. 56-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 9-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 54-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 53-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 60-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 55-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 2-C	896	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTCTTTAAATATTCAAGTCAAAGA
hu. 1-C	896	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTCTTTAAATATTCAAGTCAAAGA
hu. 18-C	896	TCATCAACAACAACAGCTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 3-C	899	TCATCAACAGCAACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTCTTTAAATATTCAAGTCAAAGA
hu. 25-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 15-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 16-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 11-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 10-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 4-C	896	TCGTCAACAACAACCCGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTCTTTAAATATTCAAGTCAAAGA
rh. 54-D	902	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTCTTTCAACATCCCAAGTCAAAGA
rh. 48-D	902	TCATCAACAGCAACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTGTTCACACATCCAGGTCAAAGA
rh. 55-D	902	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTGTTCACACATCCAGGTCAAAGA
rh. 62-D	902	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTGTTCACACATCCAGGTCAAAGA
AAV7-D	902	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTGCGGTTCAGCTCTTCAACATCCAGGTCAAAGA
rh. 52-E	905	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA
rh. 51-E	905	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA
hu. 39-E	905	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA
rh. 53-E	905	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA

FIG. 3AL

hu.37-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	990	1000	1010	1020	1030	1040	1050
rh.43-E	902	TCATCAACAACAACCTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA						
rh.50-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	GGTCACGGTGCAGGACTCCACACCACCATCGCCAAACAACCTCACCTCCACCGTCCAAGTGTTCACGGAC	939					
rh.49-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	GGTCACGGCAGAACGATGGCAGCAGCAGCTATTGCCAATAACCTTACCAGCAGCGTTCAAGTGTTCACGGAC	966					
rh.61-E	905	CCATCAACAACAACCTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	GGTCACGACGTCGAACGGCGAGACAACGGTGGCTAATAACCTTACCAGCAGCGTTTCAGATCTTTGCGGAC	939					
hu.41-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	GGTCACGACGGAATGATGGCGTCACAACCATCGCTAATAACCTTACCAGCAGCGTTCAAGTCTTCTCGGAC	969					
rh.64-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	GGTCACGACGGAATGATGGCGTCACAACCATCGCTAATAACCTTACCAGCAGCGTTCAAGTCTTCTCGGAC	969					
hu.42-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	GGTCACGACGGAATGATGGCGTCACAACCATCGCTAATAACCTTACCAGCAGCGTTCAAGTCTTCTCGGAC	969					
rh.57-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu.40-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
AAV8-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
rh.58-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
rh.40-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu.67-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu.17-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAGAGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu.6-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAGAGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu.66-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
rh.38-E	905	TCATCAACAACAACCTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu.32-F	902	TCATCAACAACAACCTGGGGATTCCGGCCTAAGCGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAGGA							
AAV9/hu	902	TCATCAACAACAACCTGGGGATTCCGGCCTAAGCGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu.31-F	902	TCATCAACAACAACCTGGGGATTCCGGCCTAAGCGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAGGA							

FIG. 3AM

hu. 44-A	969	GGTCACGCGAATGATGGCGTCACAACCATCGTAATAAACCTTACCAGCACGGTCAAGTCTTCTCGGAC
hu. 43-A	972	GGTCACGCGAATGATGGCGTCACAACCATCGTAATAAACCTTACCAGCACGGTCAAGTCTTCTCGGAC
AAV6-A	969	GGTCACGCGAATGATGGCGTCACGACCATCGTAATAAACCTTACCAGCACGGTCAAGTCTTCTCGGAC
hu. 34-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 47-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 29-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 63-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 56-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 45-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 57-B	963	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 35-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 58-B	966	GGTCACGCGAATGATGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 28-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 51-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 19-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 49-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 52-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 13-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
AAV2-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 20-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 24-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 64-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 27-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 21-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 22-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 23-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 7-C	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 61-C	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
rh. 56-C	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 9-C	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC

FIG. 3AN

hu. 54-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 53-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 60-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 55-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 2-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 1-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 18-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 3-C	969	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 25-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 15-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 16-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 11-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 10-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 4-C	966	GGTCACGCAGAATGACGGTACGACGACGAGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
rh. 54-D	972	GGTCACGACGAATGACGGCGTCACGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTCTTTTCGGAC
rh. 48-D	972	GGTCACAAACGAATGACGGCGTCACGACCATCGCCAAATAAACCTTACCAGCACGGTTCAGGTCTTTTCGGAC
rh. 55-D	972	GGTCACAAACGAATGACGGCGTCACGACCATCGCCAAATAAACCTTACCAGCACGGTTCAGGTCTTTTCGGAC
rh. 62-D	972	GGTCACAAACGGGTGACGGCGTCACGACCATCGCCAAATAAACCTTACCAGCACGGTTCAGGTCTTTTCGGAC
AAV7-D	972	GGTCACGACGAATGACGGCGTTACGACCATCGCTAATAAACCTTACCAGCACGATTTCAGGTATTCTCGGAC
rh. 52-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAAATAGCCTCACAGCACCATCCAGGTGTTTACGGAC
rh. 51-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
hu. 39-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAAATAAACCTCGCCAGCACCATCCAGGTGTTTACGGAC
rh. 53-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
hu. 37-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAAATAAACCTTACCAGCACGATTTCAGGTATTTCAGGAC
rh. 43-E	972	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
rh. 50-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
rh. 49-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
rh. 61-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
hu. 41-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAAATAAACCTTACCAGCACGATTTCAGGTATTTCAGGAC
rh. 64-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC

FIG. 3A0

hu.42-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1060	1070	1080	1090	1100	1110	1120
rh.57-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC						
hu.40-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1009	GACGACTACCAAGCTGCCCTACGTCTCGGCAACGGGACCGAGGGATGCCCTGCCGGCCTTCCCTCCGCAGG					
AAV8-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1036	TCGGAGTATCAGTCCCGTACGTGCTCGGGTCGGCGCACCAAGGTGTCTCCCGCGTTTCCAGCGGACG					
rh.58-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1009	TCGTCTGTAACGAACTGCCGTACGTGATGGATGCGGGTCAAGAGGGCAGCCTGCCTCCTTTCCCAACGACG					
rh.40-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAGGGTGCCCTCCCTCCCGGCGGACG					
hu.67-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAGGGTGCCCTCCCTCCCGGCGGACG					
hu.17-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAGGGTGCCCTCCCTCCCGGCGGACG					
hu.6-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1042	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAGGGTGCCCTCCCTCCCGGCGGACG					
hu.66-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAGGGTGCCCTCCCTCCCGGCGGACG					
rh.38-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGGCTCGGGCATCAAGGATGCCCTCCCGCGGTCAGACG					
hu.32-F	972	GGTTACGGACAACAATGGAGTCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGGCTCGGGCATCAAGGATGCCCTCCCGCGGTCAGACG					
AAV9/hu	972	GGTTACGGACAACAATGGAGTCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGGCTCGGGCATCAAGGATGCCCTCCCGCGGTCAGACG					
hu.31-F	972	GGTTACGGACAACAATGGAGTCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGGCTCGGGCATCAAGGATGCCCTCCCGCGGTCAGACG					

FIG. 3AP

hu.56-B 1036 TTGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.45-B 1036 TCGGGGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.57-B 1033 TTGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.35-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.58-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.28-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.51-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.19-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.49-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCCCGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.52-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.13-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 AAV2-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.20-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.24-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.64-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.27-B 1036 TCGGGGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.21-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.22-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.23-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG
 hu.7-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG
 hu.61-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG
 rh.56-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG
 hu.9-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG
 hu.54-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG
 hu.53-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG
 hu.60-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG
 hu.55-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG
 hu.2-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG
 hu.1-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG
 hu.18-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG

FIG. 3A

hu.3-C	1039	TCGGAGTACCAGCTCCCGTACGTCCCGGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.25-C	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.15-C	1036	TCGGGTACCAGCTCCCGTACGTCTCGGCTTGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCAGACG
hu.16-C	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCAGACG
hu.11-C	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.10-C	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.4-C	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.54-D	1042	TCGGAGTACCAGCTGCGGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.48-D	1042	TCGGATACCAGTGCCCTACGTCTCGGCTCCGCACACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.55-D	1042	TCGGAATACCAGTGCCCTACGTCTCGGCTCCGCACACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.62-D	1042	TCGGAATACCAGTGCCCTACGTCTCGGCTCCGCACACACAGGGCTGCCCTCCGTTCCCGCGGACG
AAV7-D	1042	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCGCACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.52-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.51-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
hu.39-E	1045	TCGGAATACCAGCGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.53-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
hu.37-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.43-E	1042	TCGGAGTACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.50-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.49-E	1045	TCGGAGTACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.61-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
hu.41-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.64-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
hu.42-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.57-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
hu.40-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
AAV8-E	1045	TCGGAGTACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.58-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
rh.40-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG
hu.67-E	1045	TCGGAATACCAGTGCCGTACGTCTCGGCTCTGCCACACAGGGCTGCCCTCCGTTCCCGCGGACG

FIG. 3AR

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hu.17-E	1045	TCGGAATACCAGTCCCGTACGTCTCGGCTCTGCGCACCAGGGCTGCCCGCCTCCGTTCCCCGGCGGACG	1130	1140	1150	1160	1170	1180	1190
hu.6-E	1045	TCGGAATACCAGTCCCGTACGTCTCGGCTCTGCGCACCAGGGCTGCCCGCCTCCGTTCCCCGGCGGACG							
hu.66-E	1045	TCGGAATACCAGTCCCGTACGTCTCGGCTCCGCGCACCAGGGCTGCCCTCCGTTCCCCGGCGGACG							
rh.38-E	1045	TCGGAATACCAGTCCCGTACGTCTCGGCTCCGCGCACCAGGGCTGCCCTCCGTTCCCCGGCGGACG							
hu.32-F	1042	TCAGACTATCAGTCCCGTACGTCTCGGCTCGGCTCAGAGGGCTGCCCTCCGCGCTTCCACGCGGACG							
AAV9/hu	1042	TCAGACTATCAGTCCCGTACGTCTCGGCTCGGCTCAGAGGGCTGCCCTCCGCGCTTCCACGCGGACG							
hu.31-F	1042	TCAGACTATCAGTCCCGTACGTCTCGGCTCGGCTCAGAGGGCTGCCCTCCGCGCTTCCACGCGGACG							
AAV5	1079	TCTTTACGCTGCCCGCAGTACGGTTACGCGACGCTGAACCGCGAC---AACACAGAAATCCACCGAGAG	1130	1140	1150	1160	1170	1180	1190
AAV3-3	1106	TCTTCATGGTCCCTCAGTATGGATACCTCACCCCTGAACAACGGA-----AGTCAAGCGGTGGGACG						
AAV4-4	1079	TCTTTATGGTCCCCCAGTACGGCTACTGTGGACTGGTGACCGGCAACACTTCGCAGCAACAGACTGACAG							
AAV1-A	1109	TGTTTCATGATTCGCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.46-A	1109	TGTTTCATGATTCGCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.48-A	1109	TGTTTCATGATTCGCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.44-A	1109	TGTTTCATGATTCGCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.43-A	1112	TGTTTCATGATTCGCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
AAV6-A	1109	TGTTTCATGATTCGCGCAGTACGGCTACCTAACGCTCAACAATGGC-----AGCCAGGCAGTGGGACG							
hu.34-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.47-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.29-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.63-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.56-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.45-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.57-B	1103	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.35-B	1106	TCTTCATGGTACCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.58-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.28-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.51-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							

FIG. 3A6

hu.19-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.49-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.52-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAGCAACGGG-----AGTCAGGCGGTAGGACG
hu.13-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
AAV2-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.20-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.24-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.64-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.27-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.21-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.22-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.23-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.7-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.61-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
rh.56-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.9-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.54-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.53-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.60-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.55-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.2-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.1-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.18-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.3-C	1109	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.25-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.15-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.16-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.11-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.10-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.4-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG

FIG. 3AT

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rh. 54-D	1112	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTGAACAAATGGC-----AGCCAATCGGTGGGACG
rh. 48-D	1112	TCTTCATGATTCCCCAGTACGGGTACCTGACTCTGAACAAATGGC-----AGCCAATCGGTGGGTCCG
rh. 55-D	1112	TCTTCATGATTCCCCAGTACGGGTACCTGACTCTGAACAAATGGC-----AGCCAATCGGTGGGTCCG
rh. 62-D	1112	TCTTCATGATTCCCCAGTACGGGTACCTGACTCTGAACAAATGAC-----AGCCAATCGGTGGGTCCG
AAV7-D	1112	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAATGGC-----AGTCAGTCTGTGGGACG
rh. 52-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCCCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 51-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
hu. 39-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 53-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
hu. 37-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGCCCGTAGGCCG
rh. 43-E	1112	TGTTTCATGATTCCCCAGTACGGGTACCTAACACTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 50-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 49-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 61-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
hu. 41-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGCCCGTAGGCCG
rh. 64-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
hu. 42-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGCCCGTAGGCCG
rh. 57-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
hu. 40-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGCCCGTAGGCCG
AAV8-E	1115	TGTTTCATGATTCCCCAGTACGGGTACCTAACACTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 58-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 40-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGCCCGTAGGCCG
hu. 67-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGCCCGTAGGCCG
hu. 17-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTGAACAAACGGC-----AGTCAGGCCCGTGGGCCG
hu. 6-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTGAACAAACGGC-----AGTCAGGCCCGTGGGCCG
hu. 66-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGCCCGTAGGCCG
rh. 38-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGCCCGTAGGCCG
hu. 32-F	1112	TTTTTCATGATTCCCTCAGTACGGGTATCTGACGCTTAATGATGGG-----AGCCAGGCCCGTGGGTCCG
AAV9/hu	1112	TTTTTCATGATTCCCTCAGTACGGGTATCTGACGCTTAATGATGGA-----AGCCAGGCCCGTGGGTCCG
hu. 31-F	1112	TTTTTCATGATTCCCTCAGTACGGGTATCTGACGCTTAATGATGGA-----GCCCAGGCCCGTGGGTCCG

FIG. 3AU

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	1200	1210	1220	1230	1240	1250	1260
AAV5						
AAV3-3	1146	GAGCAGCTTCTTCTGCCTAGAGTACTTTCCAGCAAGATGCTGAGAACGGGCAACAACATTTTGAGTTTACC					
AAV4-4	1167	CTCATCCTTTTACTGCCTGGAGTACTTCCCTTCGCAGATGCTAAGGACTGGAAATAAATTCCTCAATTACG					
AAV1-A	1149	AAATGCCTTCTACTGCCTGGAGTACTTCCCTTCGCAGATGCTGCGGACTGGCAACAACATTTGAAATTACG					
hu.46-A	1170	TTCATCCTTTTACTGCCTGGAATATTTCCCTTCTCAGATGCTGAGAACGGGCAACAACATTTACCTTCAGC					
hu.48-A	1170	TTCATCCTTCTACTGCCTGGAATATTTCCCTTCTCAGATGCTGAGAACGGGCAACAACATTTACCTTCAGC					
hu.44-A	1170	TTCATCCTTTTACTGCCTGGAATATTTCCCTTCTCAGATGCTGAGAACGGGCAACAACATTTACCTTCAGC					
hu.43-A	1173	TTCATCCTTTTACTGCCTGGAATATTTCCCTTCTCAGATGCTGAGAACGGGCAACAACATTTACCTTCAGC					
AAV6-A	1170	GTCATCCTTTTACTGCCTGGAATATTTCCCATCGCAGATGCTGAGAACGGGCAATAAATTTACCTTCAGC					
hu.34-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.47-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.29-B	1167	CTCTTCATTTTACTGCCTAGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.63-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.56-B	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.45-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.57-B	1164	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.35-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.58-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.28-B	1167	CTCTTCATTTTACTGCCTAGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.51-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.19-B	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.49-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.52-B	1167	CTCTTCATTTTACTGCCCGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.13-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
AAV2-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.20-B	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					
hu.24-B	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCCGTACCGGAAACAACATTTACCTTCAGC					

FIG. 3AV

hu.64-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.27-B	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCCGTAACCGGAAACAACATTTACCTTCAGC
hu.21-B	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCCGTAACCGGAAACAACATTTACCTTCAGC
hu.22-B	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGACGCTTCCGTAACCGGAAACAACATTTACCTTCAGC
hu.23-B	1167	CTCTTCCTTTTACTGCCTGGAGTATTTCCCTTCTCAGATGCTTCCGTAACCGGAAACAACATTTACCTTCAGC
hu.7-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCCGTAACCGGAAACAACATTTACCTTCAGC
hu.61-C	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
rh.56-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCCGTAACCGGAAACAACATTTACCTTCAGC
hu.9-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.54-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.53-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.60-C	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTCAATTCAGC
hu.55-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.2-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.1-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.18-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.3-C	1170	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.25-C	1167	CTCTCCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.15-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.16-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.11-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.10-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
hu.4-C	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACATTTACCTTCAGC
rh.54-D	1173	TTCAATCCTTCTACTGCCTGGAAATATTTCCCTTCTCAGATGCTGCGTACCGGTAACAACATTTACCTTCAGT
rh.48-D	1173	TTCCCTCTTCTACTGCCTGGAAATATTTCCCTTCTCAGATGCTGAGAACGGTAACAACATTTACCTTCAGC
rh.55-D	1173	TTCCCTCTTCTACTGCCTGGAAATATTTCCCTTCTCAGATGCTGAGAACGGTAACAACATTTACCTTCAGC
rh.62-D	1173	TTCCCTCTTCTACTGCCTGGAAATATTTCCCTTCTCAGATGCTGAGAACGGTAACAACATTTACCTTCAGC
AAV7-D	1173	TTCCCTCTTCTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGAGAACGGTAACAACATTTGAGTTCAGC
rh.52-E	1176	TTCCCTCTTCTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGAGAACGGTAACAACATTTTCCTTCAGC
rh.51-E	1176	TTCCCTCTTCTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGAGAACGGTAACAACATTTTCCTTCAGC

FIG. 3AW

hu.39-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC	1270	1280	1290	1300	1310	1320	1330
rh.53-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
hu.37-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAATGCTGCGAACTGGAAACAATTTTGAATTCAGC							
rh.43-E	1173	CTCCCTCCTTCTACTGCCTGGAAATACTTTCCCTCGCAGATGCTGAGAACCGGCAACAACATTTCCAGTTTACT							
rh.50-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
rh.49-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
rh.61-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
hu.41-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAATGCTGCGAACTGGAAACAATTTTGAATTCAGC							
rh.64-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
hu.42-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAATGCTGCGAACTGGAAACAATTTTGAATTCAGC							
rh.57-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
hu.40-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAATGCTGCGAACTGGAAACAATTTCTGAATTCAGC							
AAV8-E	1176	CTCCCTCCTTCTACTGCCTGGAAATACTTTCCCTTCGAGATGCTGAGAACCGGCAACAACATTTCCAGTTTACT							
rh.58-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
rh.40-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAATGCTGCGAACTGGAAACAATTTTGAATTCAGC							
hu.67-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAATGCTGCGAACTGGAAACAATTTTGAATTCAGC							
hu.17-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTTCCCTTCTCAAATGCGGAGAACGGGCAACAACATTTGAGTTTCAGC							
hu.6-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTTCCCTTCTCAAATGCGGAGAACGGGCAACAACATTTGAGTTTCAGC							
hu.66-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAATGCTGCGAACTGGAAACAATTTTGAATTCAGC							
rh.38-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAATGCTGCGAACTGGAAACAATTTTGAATTCAGC							
hu.32-F	1173	TTCGTCCTTTTACTGCCTGGAAATATTTCCCGTCGCAAAATGCTAAGAACGGGTAAACAACATTTCCAGTTTCAGC							
AAV9/hu	1173	TTCGTCCTTTTACTGCCTGGAAATATTTCCCGTCGCAAAATGCTAAGAACGGGTAAACAACATTTCCAGTTTCAGC							
hu.31-F	1173	TTCGTCCTTTTACTGCCTGGAAATATTTCCCGTCGCAAAATGCTAAGAACGGGTAAACAACATTTCCAGTTTCAGC							
AAV5	1216	TACAACTTTGAGGAGGTGCCCTTCCACTCCAGCTTCGCTCCCAGTCAGAACCTGTTCAAGCTGGCCCAACC						
AAV3-3	1237	TATACCTTCGAGGATGTACCTTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGCTTGATGAATC							
AAV4-4	1219	TACAGTTTTCGAGGAGGTGCCCTTTCCACTCGATGTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAACC							
AAV1-A	1240	TACACCTTTGAGGAAAGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAATC							

FIG. 3AX

hu. 46-A 1240 TACACCTTTGAGGAAGTGCCTCTCCACAGCAGCTGGCGGCACAGCCAGAGCCTGGACCGGCTGATGAATC
 hu. 48-A 1240 TACACCTTTGAGGAAGTGCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAATC
 hu. 44-A 1240 TACACCTTTGAGGAAGTGCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAATC
 hu. 43-A 1243 TACACCTTTGAGGAAGTGCCTCTCCACAGCAGCTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAATC
 AAV6-A 1240 TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAATC
 hu. 34-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGCCGCTCATGAATC
 hu. 47-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 29-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 63-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 56-B 1237 TACACCTTTGAAGACGTTCCTTTCCACAGCAGCTACGCTCACAGTCAAAGTCTGGACCGTCTCATGAATC
 hu. 45-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 57-B 1234 TACACCTTTGAAGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 35-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGCCGCTCATGAATC
 hu. 58-B 1237 TACACCTTTGAGGATGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 28-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 51-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCGGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 19-B 1237 TACACCTTTGAAGACGTTCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 49-B 1237 TACACCTTTGAGGATGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 52-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 13-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 AAV2-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 20-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 24-B 1237 TACACCTTTGAAGACGTTCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 64-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC
 hu. 27-B 1237 TACACCTTTGAAGACGTTCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 21-B 1237 TACACCTTTGAAGACGTTCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 22-B 1237 TACACCTTTGAAGACGTTCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 23-B 1237 TACACCTTTGAAGACGTTCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 7-C 1237 TACACCTTTGAAGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
 hu. 61-C 1237 TACACCTTTGAAGACGTGCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC

FIG. 3AY

rh. 56-C	1237	TACACCTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 9-C	1237	TACACCTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTTTGGACCGGCTGATGAATC
hu. 54-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGGGTTTGGATCGGCTGATGAATC
hu. 53-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 60-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 55-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 2-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 1-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 18-C	1237	TACACCTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 3-C	1240	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACTGCCAGAGTCTGGATCGGCTGATGAATC
hu. 25-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 15-C	1237	TACACCTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 16-C	1237	TACACCTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 11-C	1237	TACACTTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTTTGGACCGGCTGATGAATC
hu. 10-C	1237	TACACCTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTTTGGACCGGCTGATGAATC
hu. 4-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
rh. 54-D	1243	TACACTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTAGACCGGCTGATGAATC
rh. 48-D	1243	TACACCTTCGAGGACGTTCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
rh. 55-D	1243	TACACCTTCGAGGACGTTCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
rh. 62-D	1243	TACACCTTCGAGGACGTTCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
AAV7-D	1243	TACAGCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
rh. 52-E	1246	TACACTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
rh. 51-E	1246	TACACTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
hu. 39-E	1246	TACACTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
rh. 53-E	1246	TACACTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
hu. 37-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
rh. 43-E	1243	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
rh. 50-E	1246	TACACTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
rh. 49-E	1246	TACACTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC
rh. 61-E	1246	TACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGACCGGCTGATGAATC

FIG. 3A2

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hu. 41-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC	1340	1350	1360	1370	1380	1390	1400
rh. 64-E	1246	TACACTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGTTTGGACAGGCTGATGAATC							
hu. 42-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC							
rh. 57-E	1246	TACACTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGTTTGGACAGGCTGATGAATC							
hu. 40-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC							
AAV8-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGGCTGATGAATC							
rh. 58-E	1246	TACACTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGTTTGGACAGGCTGATGAATC							
rh. 40-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC							
hu. 67-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC							
hu. 17-E	1246	TACCAGTTTGAGGACGTGCCCTTTTCACAGCAGCTACGCCATAGCCAAAGCCTGGACCGCTGATGAACC							
hu. 6-E	1246	TACCAGTTTGAGGACGTGCCCTTTTCACAGCAGCTACGCCATAGCCAAAGCCTGGACCGGCTGATGAACC							
hu. 66-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTCGGACCGACTGATGAATC							
rh. 38-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC							
hu. 32-F	1243	TACGAGTTTGAGAACGTACCTTTCCATAGCAGCTACGCTACAGCCAAAGCCTGGACCGACTAATGAATC							
AAV9/hu	1243	TACGAGTTTGAGAACGTACCTTTCCATAGCAGCTACGCTACAGCCAAAGCCTGGACCGACTAATGAATC							
hu. 31-F	1243	TACGAGTTTGAGAACGTACCTTTCCATAGCAGCTACGCTACAGCCAAAGCCTGGACCGACTAATGAATC							
								
AAV5	1286	CGCTGGTGGACCACTACTGTACCGCTTCGTGAGCACAAAT-----AACACTGG							
AAV3-3	1307	CTCTTATTGATCAGTATCTGTACTACCTGAACAGAACGCAAGGAACAACCTCTGGAACAACCAACCAATC							
AAV4-4	1289	CTCTCATCGACCACTACCTGTGGGACTGCAATCGACCAACCGGAACCACTTGAATGCCGGGACTGC							
AAV1-A	1310	CTCTCATCGACCAATACCTGTATTACCTGAACAGAACTCAA--AATCAGTCCGGAAGTCCCCAAACAA							
hu. 46-A	1310	CTCTCATCGACCAATACCTGTATTACCTGAACAGAACTCAA--AATCAGTCCGGAAGTCCCCAAACAG							
hu. 48-A	1310	CTCTCATCGACCAATACCTGTATTACCTGAACAGAACTCAA--AATCAGTCCGGAAGTCCCCAAACAA							
hu. 44-A	1310	CTCTCATCGACCAATACCTGTATTACCTGAACAGAACTCAA--AATCAGTCCGGAAGTCCCCAAACAA							
hu. 43-A	1313	CTCTCATCGTCCAATACCTGTATTACCTGAACAGAACTCAA--AATCAGTCCGGAAGTCCCCAAACAA							
AAV6-A	1310	CTCTCATCGACCACTACCTGTATTACCTGAACAGAACTCAA--AATCAGTCCGGAAGTCCCCAAACAA							
hu. 34-B	1307	CTCTCATCGACCACTACCTGTATTACTTGAGCAGAACTCAA--ACTCCAAGTGAACCAACCGCAGTC							
hu. 47-B	1307	CTCTCATCGACCACTACCTGTATTACTTGAGCAGAACTCAA--ACTCCAAGTGAACCAACCGCAGTC							

FIG. 3BA

hu.29-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.63-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.56-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.45-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.57-B	1304	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.35-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.58-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.28-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.51-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.19-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.49-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.52-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.13-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
AAV2-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.20-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.24-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.64-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.27-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.21-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.22-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.23-B	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.7-C	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.61-C	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
rh.56-C	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.9-C	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.54-C	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.53-C	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.60-C	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.55-C	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC
hu.2-C	1307	CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC

FIG. 3BB

hu.1-C 1307 CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
 hu.18-C 1307 CTCTGATCGACCAGTACCTATATATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
 hu.3-C 1310 CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
 hu.25-C 1307 CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
 hu.15-C 1307 CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
 hu.16-C 1307 CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
 hu.11-C 1307 CTCTGATCGACCAGTATCTATATATCTGAACAGGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
 hu.10-C 1307 CTCTGATCGACCAGTATCTATATATCTGAACAGGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
 hu.4-C 1307 CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
 rh.54-D 1313 CCTCATCGACCAGTACCTGTATTACCTGGCTAGAACACAGAGTAAACCCAGGAGGCACATCTGGCAATCG
 rh.48-D 1313 CTCTTATCGACCAGTACCTGTATTACCTGGCCAGAACACAGAGCAACGCGAGGACAGCTGGCAATCG
 rh.55-D 1313 CTCTTATCGACCAGTACCTGTATTACCTGGCCAGAACACAGAGCAACGCGAGGACAGCTGGCAATCG
 rh.62-D 1313 CTCTTATCGACCAGTACCTGTATTACCTGGCCAGAACACAGAGCAACGCGAGGACAGCTGGCAATCG
 AAV7-D 1313 CCTCATCGACCAGTACTTGTACTACCTGGCCAGAACACAGAGTAAACCCAGGAGGACAGCTGGCAATCG
 rh.52-E 1316 CTCTCATCGACCAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
 rh.51-E 1316 CTCTCATCGACCAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
 hu.39-E 1316 CTCTCATCGACCAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
 rh.53-E 1316 CTCTCATCGACCAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
 hu.37-E 1316 CTCTCATCGACCAGTACCTGTACTACCTGTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCA
 rh.43-E 1313 CTCTGATTGACCAGTACCTGTACTACTTGTCTCGGACTCAAAACA---ACAGGAGGCACGCGAAATACGCA
 rh.50-E 1316 CTCTCGTCGACCAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
 rh.49-E 1316 CTCTCATCGACCAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
 rh.61-E 1316 CTCTCATCGACCAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
 hu.41-E 1316 CTCTCATCGACCAGTACCTGTACTACTTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCA
 rh.64-E 1316 CTCTCATCGACCAGTACCTGTACTACTTATCCAGAACTCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
 hu.42-E 1316 CTCTCATCGACCAGTACCTGTACTACTTATCCAGAACTCAGTCT---ACAGGAGGAACCTCAAGGTACCCA
 rh.57-E 1316 CTCTCATCGACCAGTACCTGTACTACTTATCCAGAACTCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
 hu.40-E 1316 CTCTCATCGACCAGTACCTGTACTACTTATCCAGAACTCAGTCT---ACAGGAGGAACCTCAAGGTACCCA
 AAV8-E 1316 CTCTGATTGACCAGTACCTGTACTACTTGTCTCGGACTCAAAACA---ACAGGAGGCACGCGAAATACGCA
 rh.58-E 1316 CTCTCATCGACCAGTACCTGTACTACTTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA

FIG. 3BC

rh. 40-E	1316	CTCTCATCGACCAGTACCTGTACTACTTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCA							
hu. 67-E	1316	CTCTCATCGACCAGTACCTGTACTACTTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCA							
hu. 17-E	1316	CCCTCATCGACCAGTACCTGTACTACTGTCGGAACCTCAGTCC---ACGGGAGGTACCGCAGGAACCTCA							
hu. 6-E	1316	CCCTCATCGACCAGTACCTGTACTACTGTCGGAACCTCAGTCC---ACGGGAGGTACCGCAGGAACCTCA							
hu. 66-E	1316	CTCTCATCGACCAGTACCTGTACTACTTATCCAGAACTCGGTCC---ACAGGAGGAACCTCAAGGTACCCA							
rh. 38-E	1316	CTCTCATCGACCAGTACCTGCACACTACTTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCA							
hu. 32-F	1313	CACCTCATCGACCAATACTTGTAATACTCTCTCAAAGACTATTAAACGGTTCTGGA-----CAGAATCAACA							
AAV9/hu	1313	CACCTCATCGACCAATACTTGTAATACTCTCTCAAAGACTATTAAACGGTTCTGGA-----CAGAATCAACA							
hu. 31-F	1313	CACCTCATCGACCAATACTTGTAATACTCTCTCAAAGACTATTAAACGGTTCTGGA-----CAGAATCAACA							
			1410	1420	1430	1440	1450	1460	1470
								
AAV5	1335	CGGAGTCCAGTTCAACAAGAACCTGGCCGGGAGATACGCCAACACCTACAAAACCTGGTTCCTCGGGGCCCC							
AAV3-3	1377	ACGGCTGCTTTTAGCCAGGCTGGCCCTCAGTCTATGTCTTTGACGGCCAGAAATTTGGCTACCTGGGCCCC							
AAV4-4	1359	CACCACCAACTTTACCAAGCTGCGGCTTACCAACTTTTCCAACCTTAAAGAACTGGCTGCCCGGGCCT							
AAV1-A	1377	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
hu. 46-A	1377	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
hu. 48-A	1377	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
hu. 44-A	1377	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
hu. 43-A	1380	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
AAV6-A	1377	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
hu. 34-B	1374	AAGGCTTCAGTTTTTTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 47-B	1374	AAGGCTTCAGTTTTTTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 29-B	1374	CAGGCTTCAGTTTTTTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 63-B	1374	AAGGCTTCAGTTTTTTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 56-B	1374	CAGGCTTCAGTTTTTTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 45-B	1374	AAGGCTTCAGTTTTTTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 57-B	1371	CAGGCTTCAGTTTTTTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 35-B	1374	AAGGCTTCAGTTTTTTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 58-B	1374	CAGGCTTCAGTTTTTTCAGGCCGGAGCGAGTGACATTCGGGATCAGTCTAGGAACTGGCTTCTCTGGACCC							

FIG. 3BD

hu. 28-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCAGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 51-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 19-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 49-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 52-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 13-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
AAV2-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 20-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 24-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 64-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 27-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 21-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 22-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 23-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 7-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCT
hu. 61-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCT
rh. 56-C	1374	TAGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 9-C	1374	TAGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 54-C	1371	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 53-C	1371	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 60-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 55-C	1371	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 2-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 1-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 18-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 3-C	1377	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 25-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 15-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 16-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG
hu. 11-C	1374	TAGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCCGGCTGGACCCG

FIG. 3BE

hu.10-C 1374 TAGGCTACTGTTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAAAAGTGGCTGCCCTGGACCT
 hu.4-C 1374 TCGGCTACTGTTTAGCCAAAGCTGGACCAACCAACATGTCTCTTCAAGCTAAAAAAGTGGCTGCCCTGGACCT
 rh.54-D 1383 GGAAGTGCAGTTTTACAGGGGGGCTTCCACCATGGCCGACCAAGCCAAAGAACTGGTTACCTGGACCT
 rh.48-D 1383 GGAAGTGCAGTTTTATCAGGGGGGGCTACCAACATGGCCGACCAAGCCAAAGAACTGGCTGCCCTGGACCT
 rh.55-D 1383 GGAAGTGCAGTTTTATCAGGGGGGGCTACCAACATGGCCGACCAAGCCAAAGAACTGGCTGCCCTGGACCT
 rh.62-D 1383 GGAAGTGCAGTTTTATCAGGGGGGGCTACCAACATGGCCGACCAAGCCAAAGAACTGGCTGCCCTGGACCT
 AAV7-D 1383 GGAAGTGCAGTTTTACAGGGGGGGCTTCAACTATGGCCGACCAAGCCAAAGAACTGGTTACCTGGACCT
 rh.52-E 1383 GCAGTTGCTGTCTTCTCAGGGGGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC
 rh.51-E 1383 GCAGTTGCTGTCTTCTCAGGGGGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC
 hu.39-E 1383 GCAGTTGCTGTCTTCTCAGGGGGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC
 rh.53-E 1383 GCAGTTGCTGTCTTCTCAGGGGGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC
 hu.37-E 1383 GCAATTGTTATTTTCTCAAGCTGGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
 rh.43-E 1380 GACTCTGGGCTTCAGCCAAAGTGGGGCTAATAACAATGGCCAATCAGGCCAAGAACTGGCTGCCAGGACCC
 rh.50-E 1383 GCAGTTGCTGTCTTCTCAGGGGGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC
 rh.49-E 1383 GCAGTTGCTGTCTTCTCAGGGGGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC
 rh.61-E 1383 GCAGTTGCTGTCTTCTCAGGGGGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC
 hu.41-E 1383 GCAATTGTTATTTTCTCAAGCTGGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
 rh.64-E 1383 GCAGTTGCTGTCTTCTCAGGGGGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC
 hu.42-E 1383 GCAATTGTTATTTTCTCAAGCTGGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
 rh.57-E 1383 GCAGTTGCTGTCTTCTCAGGGGGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC
 hu.40-E 1383 GCAATTGTTATTTTCTCAAGCTGGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
 AAV8-E 1383 GACTCTGGGCTTCAGCCAAAGTGGGGCTAATAACAATGGCCAATCAGGCCAAGAACTGGCTGCCAGGACCC
 rh.58-E 1383 GCAGTTGCTGTCTTCTCAGGGGGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC
 rh.40-E 1383 GCAATTGTTATTTTCTCAAGCTGGGGCTGCAACATGTGGCTCGGGCTAAGAACTGGCTACCTGGACCT
 hu.67-E 1383 GCAATTGTTATTTTCTCAAGCTGGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
 hu.17-E 1383 GCAGTTGCTATTTTCTCAGGGGGGGCTAATAACATGTGGCTCAGGCCAAGAACTGGCTACCCGGGCCC
 hu.6-E 1383 GCAGTTGCTATTTTCTCAGGGGGGGCTAATAACATGTGGCTCAGGCCAAGAACTGGCTACCCGGGCCC
 hu.66-E 1383 GCAATTGTTATTTTCTCAAGCTGGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
 rh.38-E 1383 GCAATTGTTATTTTCTCAAGCTGGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
 hu.32-F 1377 AACGCTAAATTCAGCGTGGCCGGACCCAGCAACATGGCTGTCCAGGGAAGAACTACATACCTGGACCC

FIG. 3Bf

AAV9/hu	1377	AACGCTAAAAATTCAGTGTGGCCGGACCCAGCAACATGGCTGTCCAGGGAAGAACTACATACCTGGACCC	1480	1490	1500	1510	1520	1530	1540
hu.31-F	1377	AACGCTAAAAATTCAGTGTGGCCGGACCCAGCAACATGGCTGTCCAGGGAAGAACTACATACCTGGACCC						
AAV5	1405	ATGGGCCGAACCCAGGGCTGGAACCTGGGCTCCGGGTCAAC						
AAV3-3	1447	TGCTACCGGCAACAGAGACTTTCAAAGACTGCTAACGACAAC						
AAV4-4	1429	TCAATCAAGCAGCAGGGCTTCTCAAAGACTGCCAATCAAAACTACAAGATCCTGCCACCGGGTCAGACA						
AAV1-A	1447	TGTTATCGGCAGCAGCGGCTTCTAAACAAAACAGACAAC						
hu.46-A	1447	TGTTATCGGCAGCAGCGGCTTCTAAACAAAACAGACAAC						
hu.48-A	1447	TGTTATCGGCAGCAGCGGCTTCTAAACAAAACAGACAAC						
hu.44-A	1447	TGTTATCGGCAGCAGCGGCTTCTAAACAAAACAGACAAC						
hu.43-A	1450	TGTTATCGGCAGCAGCGGCTTCTAAACAAAACAGACAAC						
AAV6-A	1447	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.34-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.47-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.29-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.63-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.56-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.45-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.57-B	1441	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.35-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.58-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.28-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.51-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.19-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.49-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.52-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
hu.13-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						
AAV2-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC						

FIG. 3BG

hu. 20-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTGATT
hu. 24-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTGATT
hu. 64-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	-----AACAAACAGTGAAT
hu. 27-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTGATT
hu. 21-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTGATT
hu. 22-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTGATT
hu. 23-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTAACT
hu. 7-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 61-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
rh. 56-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 9-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 54-C	1441	TGTTATCGCCAGCAGCGTTTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 53-C	1441	TGTTATCGCCAGCAGCGTTTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 60-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 55-C	1441	TGTTATCGCCAGCAGCGTTTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 2-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 1-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 18-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAACTGCAACT
hu. 3-C	1447	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 25-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 15-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 16-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 11-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 10-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 4-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
rh. 54-D	1453	TGCTTCCGGCAACAAGAGTTTCCAAAACACTGGATCAAAAC	-----AACAAACAGCAACT
rh. 48-D	1453	TGCTTCCGGCAACAAGAGTCTCCAAAGACGCTGGATCAAAAC	-----AACAAACAGCAACT
rh. 55-D	1453	TGCTTCCGGCAACAAGAGTCTCCAAAGACGCTGGATCAAAAC	-----AACAAACAGCAACT
rh. 62-D	1453	TGCTTCCGGCAACAAGAGTCTCCAAAGACGCTGGATCAAAAC	-----AACAAACAGCAACT
AAV7-D	1453	TGCTTCCGGCAACAAGAGTCTCCAAAGACGCTGGATCAAAAC	-----AACAAACAGCAACT

FIG. 3BH

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rh.52-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC	1550	1560	1570	1580	1590	1600	1610
rh.51-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC						
hu.39-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC	1460	GGCCTTCGCCACGACCAATAGGATGGAGCTCGAGGGCGCGAGTTAC					
rh.53-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC	1502	TTCCTTGGACAGCGGCCAGCAAATATCATCTCAATGGCCGCGACTCGCTGGTGAATCCAGGACCAGCTAT					
hu.37-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
rh.43-E	1450	TGTTACCGCCAACAACGCGTCTCAACGACAACCGGGCAAAAC							
rh.50-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
rh.49-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
rh.61-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
hu.41-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
rh.64-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
hu.42-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
rh.57-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
hu.40-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
AAV8-E	1453	TGTTACCGCCAACAACGCGTCTCAACGACAACCGGGCAAAAC							
rh.58-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
rh.40-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
hu.67-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
hu.17-E	1453	TGCTACCGGACAGCAACGCGTCTCCACGACACTGTGCAAAAC							
hu.6-E	1453	TGCTACCGGACAGCAACGCGTCTCCACGACACTGTGCAAAAC							
hu.66-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
rh.38-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
hu.32-F	1447	AGTACCGGACAAACAGTGTCTCAACCACTGTGACTCAAAAC							
AAV9/hu	1447	AGTACCGGACAAACAGTGTCTCAACCACTGTGACTCAAAAC							
hu.31-F	1447	AGTACCGGACAAACAGTGTCTCAACCACTGTGACTCAAAAC							

FIG. 3BI

AAV4-4 - 1499 GTCTCATCAAAATACGAGACGCACAGCACTCTGGACGGAAGATGGAGTGGCCCTGACCCCCGGACCTCCAAT
 AAV1-A - 1502 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATCCATCATCAACCCCTGGCACTGCTAT
 hu.46-A 1502 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATCCATCATCAACCCCTGGCACTGCTAT
 hu.48-A 1502 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATCCATCATCAACCCCTGGCACTGCTAT
 hu.44-A 1502 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATCCATCATCAACCCCTGGCACTGCTAT
 hu.43-A 1505 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATCTATAATCAACCCCTGGCACTGCTAT
 AAV6-A 1502 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATGGGCGGCGGCCAT
 hu.34-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.47-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.29-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.63-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.56-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.45-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.57-B 1496 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.35-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.58-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.28-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.51-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.19-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.49-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.52-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.13-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 AAV2-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.20-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.24-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.64-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.27-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.21-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.22-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT
 hu.23-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT

FIG. 3BJ

hu. 7-C	1499	TTCCCTGGACTGCGGGCTACAAAGTATCACCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 61-C	1499	TTCCCTGGAGCCGAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
rh. 56-C	1499	TTCCCTGGACTGCGGGCTACAAAGTACCACTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 9-C	1499	TTCCCTGGACTGCGGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 54-C	1496	TTCCCTGGACTGGAGCTACCAAGTACCACTCAATGGCGGAGACTCTTTGGTGAACCCGGGCCCGGCCAT
hu. 53-C	1496	TTCCCTGGACTGGAGCTACCAAGTACTACCTCAATGGCGAGAGACTCTTTGGTGAACCCGGGCCCGGCCAT
hu. 60-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 55-C	1496	TTCCCTGGACTGGAGCTACCAAGTACCACTCAATGGCGAGAGACTCTTTGGTGAACCCGGGCCCGGCCAT
hu. 2-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 1-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 18-C	1499	TTCCCTGGACTGCGGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 3-C	1502	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 25-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 15-C	1499	TTCCCTGGACTGCGGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 16-C	1499	TTCCCTGGACTGCGGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 11-C	1499	TTCCCTGGACTGCGGGCTACAAAGTATCGTCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 10-C	1499	TTCCCTGGACTGCGGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
hu. 4-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAAATCCAGGACCAGCTAT
rh. 54-D	1508	TTGCTTGGACTGGTGCCACCAATAATCACCTGAACGGCAGAAACTCATTTGGTGAATCCTGGTGTGCGCCAT
rh. 48-D	1508	TTGCTTGGACTGGTGCCACCAATAATACCATCTAAATGGAAGAAATTCATTGGTTAAATCCCGGTGTGCGCCAT
rh. 55-D	1508	TTGCTTGGACTGGTGCCACCAATAATACCATCTAAATGGAAGAAATTCATTGGTTAAATCCCGGTGTGCGCCAT
rh. 62-D	1508	TTGCTTGGACTGGTGCCACCAATAATACCATCTAAATGGAAGAAATTCATTGGTTAAATCCCGGTGTGCGCCAT
AAV7-D	1508	TTGCTTGGACTGGTGCCACCAATAATACCATCTAAATGGAAGAAATTCATTGGTTAAATCCCGGTGTGCGCCAT
rh. 52-E	1508	TTGCTTGGACTGGTGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTGTGCGCCAT
rh. 51-E	1508	TTGCTTGGACTGGTGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTGTGCGCCAT
hu. 39-E	1508	TTGCTTGGACTGGTGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTGTGCGCCAT
rh. 53-E	1508	TTGCTTGGACTGGTGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTGTGCGCCAT
hu. 37-E	1508	TTGCTTGGACTGGTGCCACCAATAATACCATCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTGCGCCAT
rh. 43-E	1505	TTGCTTGGACTGGTGCCACCAATAATACCATCTGAATGGAAGAAATTCATTGGTTAAATCCCTGGCATCGCTAT
rh. 50-E	1508	TTGCTTGGACTGGTGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTGTGCGCCAT

FIG. 3BK

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rh. 49-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT	1620	1630	1640	1650	1660	1670	1680
rh. 61-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT						
hu. 41-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT	1530						
rh. 64-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT	1572						
hu. 42-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT	1569						
rh. 57-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT	1572						
hu. 40-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT	1572						
AAV8-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAATGGAAGAAATTCATTGGCTAATCCTGGCATCGCTAT	1572						
rh. 58-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT	1572						
rh. 40-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTCGCTAT	1572						
hu. 67-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT	1572						
hu. 17-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAATGGCAGAGACTCTCTGGTAAATCCCGGTGTCGCTAT	1572						
hu. 6-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAATGGCAGAGACTCTCTGGTAAATCCCGGTGTCGCTAT	1572						
hu. 66-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT	1572						
rh. 38-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT	1572						
hu. 32-F	1502	TTGCTTGCCCTGGAGCTTCTCTTGGGCTCTCAATGGACGTAATAGCTTGAATCCTGGACCTGCTAT	1572						
AAV9/hu	1502	TTGCTTGCCCTGGAGCTTCTCTTGGGCTCTCAATGGACGTAATAGCTTGAATCCTGGACCTGCTAT	1572						
hu. 31-F	1502	TTGCTTGCCCTGGAGCTTCTCTTGGGCTCTCAATGGACGTAATAGCTTGAATCCTGGACCTGCTAT	1572						
AAV5	1530	CATGACCAACAACCTCCAGGGCAGCAACACCTATGCCCTGGAGAAACACTATGATCTTCAACAGCCAGCCG							
AAV3-3	1572	GGCAGTCACAAGGACGATGAAGAAAATTTTCCCTATGCACGGCAATCTAATATTTGGCAAAGAGGG							
AAV4-4	1569	GGCAGCGCTGGACCTCGGACAGCAAGTTCAGC--AACAGCCAGCTCATCTTTCGGGGCCCTAAACAG							
AAV1-A	1572	GGCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							
hu. 46-A	1572	GGCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							
hu. 48-A	1572	GGCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							
hu. 44-A	1572	GGCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							
hu. 43-A	1575	GGCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							
AAV6-A	1572	GGCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							

FIG. 3BL

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hu. 34-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 47-B 1569 GGCAAGCCACAAGGACATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 29-B 1569 GGCAAGCCACAAGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 63-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGAC
hu. 56-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 45-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 57-B 1566 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 35-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 58-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGA
hu. 28-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 51-B 1569 GGCAAGCCACAAGGACATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 19-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGAC
hu. 49-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 52-B 1569 GGCAAGCCACAAGGACATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 13-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
AAV2-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGC
hu. 20-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGAC
hu. 24-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGAC
hu. 64-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGAC
hu. 27-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGAC
hu. 21-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGAC
hu. 22-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGAC
hu. 23-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGAC
hu. 7-C 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGAAACAAGGA
hu. 61-C 1569 GGCAAGCCACAAGGATGACGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGTAACAAGGA
rh. 56-C 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGTAACAAGGA
hu. 9-C 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGTAACAAGGA
hu. 54-C 1566 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGTAACAAGGA
hu. 53-C 1566 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGTAACAAGGA
hu. 60-C 1569 GGCAAGCCACAAGGATGACGAAGAAAAGTTTTTCCCTCAGAGCGGGTTCATCTTTGGTAACAAGGA

FIG. 3BM

hu.55-C 1566 GGCCAGCCACAAGGACGATGAAGAAAAGTTTTTCCCATGCATGGAACCCCTAATATTTGGTAAAGAAGGA
 hu.2-C 1569 GGCCAGTCACAAGGATGACGAAGAAAAGTTTTTCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu.1-C 1569 GGCCAGTCACAAGGATGACGAAGAAAAGTTTTTCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu.18-C 1569 GGCCAGCCACAAGACGATGAAGAAAAGTTTTTCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu.3-C 1572 GGCCAGTCACAAGGATGACGAAGAAAAGTTTTTCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu.25-C 1569 GGCCAGTCACAAGGATGACGAAGAAAAGTTTTTCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu.15-C 1569 GGCCAGCCACAAGACGATGAAGAAAAGTTTTTCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu.16-C 1569 GGCCAGCCACAAGACGATGAAGAAAAGTTTTTCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu.11-C 1569 GGCCAGCCACAAGACGATGAAGAAAAGTTTTTCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu.10-C 1569 GGCCAGCCACAAGACGATGAAGAAAAGTTTTTCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu.4-C 1569 GGCCAGTCACAAGGATGACGAAGAAAAGTTTTTCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 rh.54-D 1578 GGCAACTCACAAAGGACGACGAGGACCGCTTTTCCCATCCAGCGGAGTCTCTGATTTTGGAAAACTGGA
 rh.48-D 1578 GGCAACCCACAAGGACGACGAGGAAACGCTTCTTCCCTTCGAGCGGAGTCTCTGATTTTGGAAAACTGGA
 rh.55-D 1578 GGCAACCCACAAGGACGACGAGGAAACGCTTCTTCCCTTCGAGCGGAGTCTCTGATTTTGGAAAACTGGA
 rh.62-D 1578 GGCAACCCACAAGGACGACGAGGAAACGCTTCTTCCCTTCGAGCGGAGTCTCTGATTTTGGAAAACTGGA
 AAV7-D 1578 GGCAACTCACAAAGGACGACGAGGACCGCTTTTCCCATCCAGCGGAGTCTCTGATTTTGGAAAACTGGA
 rh.52-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGAGTCTCTGATTTTGGCAAGCAGGGA
 rh.51-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGAGTCTCTGATTTTGGCAAGCAGGGA
 hu.39-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGAGTCTCTGATTTTGGCAAGCAGGGA
 rh.53-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGAGTCTCTGATTTTGGCAAGCAGGGA
 hu.37-E 1578 GGCAACCCACAAGGACGACGAGGAAACGCTTCTTCCCGTCGAGTGGAGTCTCTGATTTTGGAAAAACAGGGT
 rh.43-E 1575 GGCAACACACAAGACGACGAGGAGCGCTTTTCCCAGTAACGGGA--TCCTGTTTTGGCAACAATAAT
 rh.50-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGAGTCTCTGATTTTGGCAAGCAGGGA
 rh.49-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGAGTCTCTGATTTTGGCAAGCAGGGA
 rh.61-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGAGTCTCTGATTTTGGCAAGCAGGGA
 hu.41-E 1578 GGCAACCCACAAGGACGACGAGGAAACGCTTCTTCCCGTCGAGTGGAGTCTCTGATTTTGGAAAAACAGGGT
 rh.64-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGAGTCTCTGATTTTGGCAAGCAGGGA
 hu.42-E 1578 GGCAACCCACAAGGACGACGAGGAAACGCTTCTTCCCGTCGAGTGGAGTCTCTGATTTTGGAAAAACAGGGT
 rh.57-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGAGTCTCTGATTTTGGCAAGCAGGGA
 hu.40-E 1578 GGCAACCCACAAGGACGACGAGGAAACGCTTCTTCCCGTCGAGTGGAGTCTCTGATTTTGGAAAAACAGGGT

FIG. 3BN

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AAV8-E	1578	GGCAACACACAAGACGACGAGGAGCGT	1690	1700	1710	1720	1730	1740	1750
rh. 58-E	1578	GGCAACCAACAAGGACGACGAGGACCGCT	1690	1700	1710	1720	1730	1740	1750
rh. 40-E	1578	GGCAACGCATAAGGACGACGAGGAACGTT	1690	1700	1710	1720	1730	1740	1750
hu. 67-E	1578	GGCAACCCACAAGGACGACGAGGAACGCT	1690	1700	1710	1720	1730	1740	1750
hu. 17-E	1578	GGCAACGCACAAGGACGACGAGAGCGATT	1690	1700	1710	1720	1730	1740	1750
hu. 6-E	1578	GGCAACGCACAAGGACGACGAGAGCGATT	1690	1700	1710	1720	1730	1740	1750
hu. 66-E	1578	GGCAACCCACAAGGACGACGAGGAACGCT	1690	1700	1710	1720	1730	1740	1750
rh. 38-E	1578	GGCAACCCACAAGGACGACGAGGAACGCT	1690	1700	1710	1720	1730	1740	1750
hu. 32-F	1572	GGCCAGCCACAAGAGGAGGAGGACCGTT	1690	1700	1710	1720	1730	1740	1750
AAV9/hu	1572	GGCCAGCCACAAGAGGAGGAGGACCGTT	1690	1700	1710	1720	1730	1740	1750
hu. 31-F	1572	GGCCAGCCACAAGAGGAGGAGGACCGTT	1690	1700	1710	1720	1730	1740	1750
AAV5	1600	CGGAACCCGGGCACCAACCGCCACGTACCT	1690	1700	1710	1720	1730	1740	1750
AAV3-3	1642	ACA-----ACGGCAAGTAACGCAGAAATT	1690	1700	1710	1720	1730	1740	1750
AAV4-4	1636	AAC-----GGCAACACGCGCCACCGTACC	1690	1700	1710	1720	1730	1740	1750
AAV1-A	1642	GCC-----GGAGCTTCAAAACACTGCATT	1690	1700	1710	1720	1730	1740	1750
hu. 46-A	1642	GCC-----GGAGCTTCAAAACACTGCATT	1690	1700	1710	1720	1730	1740	1750
hu. 48-A	1642	GCC-----GGAGCTTCAAGCACTGCATT	1690	1700	1710	1720	1730	1740	1750
hu. 44-A	1642	GCC-----GGAGCTTCAAAACACTGCATT	1690	1700	1710	1720	1730	1740	1750
hu. 43-A	1645	GCC-----GGAGCTTCAAAACACTGCATT	1690	1700	1710	1720	1730	1740	1750
AAV6-A	1642	GCC-----GGAGCTTCAAAACACTGCATT	1690	1700	1710	1720	1730	1740	1750
hu. 34-B	1639	TCA-----GAGAAAACAAAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750
hu. 47-B	1639	TCA-----GAGAAAACAAAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750
hu. 29-B	1639	CCA-----GAGAAAACAAAATGTGGATATT	1690	1700	1710	1720	1730	1740	1750
hu. 63-B	1639	TCG-----GGA AAAA ACTAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750
hu. 56-B	1639	TCA-----GAGAAAACAAAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750
hu. 45-B	1639	TCA-----GAGAAAACAAAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750
hu. 57-B	1636	TCA-----GAGAAAACAAAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750

FIG. 3B

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hu.35-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.58-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGAA
 hu.28-B 1639 TCA-----GAGAAACAAATGTGGATATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.51-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.19-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA
 hu.49-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGAA
 hu.52-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.13-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 AAV2-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.20-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA
 hu.24-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA
 hu.64-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.27-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA
 hu.21-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA
 hu.22-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA
 hu.23-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA
 hu.7-C 1639 ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCATGATTACAGATGAAGAAAGAAATCCGCA
 hu.61-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGA
 rh.56-C 1639 ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCATGATTACAGATGAAGAAAGAAATCCGCA
 hu.9-C 1639 ACA-----AATGCTAACGACGCGGATTGGAG---CATGTTATGATTACAGATGAAGAAAGAAATCAGGA
 hu.54-C 1636 ACA-----AATGCTACCAACGCGGAATTGGAA---AATGTCATGATTACAGATGAAGAGGAAATCAGGA
 hu.53-C 1636 ACA-----AATGCTACCAACGCGGAATTGGAA---AATGTCATGATTACAGATGAAGAGGAAATCAGGA
 hu.60-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGA
 hu.55-C 1636 ACA-----AATGCTACCAACGCGGAATTGGAA---AATGTCATGATTACAGATGAAGAGGAAATCAGGA
 hu.2-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGG
 hu.1-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGG
 hu.18-C 1639 ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCATGATTACAGATGAAGAAAGAAATCCGCA
 hu.3-C 1642 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGC
 hu.25-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGA
 hu.15-C 1639 ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCATGATTACAGATGAAGAAAGAAATCCGCA

FIG. 3BP

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hu.16-C 1639 ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCATGATTACAGATTGAAGAAGAAATCCGCA
 hu.11-C 1639 ACA-----AATGCTAACGACGCGGATTGGAG---CATGTTATGATTACAGATTGAAGAAGAAATCAGGA
 hu.10-C 1639 ACA-----AATGCTAACGACGCGGATTGGAG---CATGTTATGATTACAGATTGAAGAAGAAATCAGGA
 hu.4-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATTGAAGAAGAAATCAGGG
 rh.54-D 1648 GCA-----ACCAAC---AAGACTACATTGGAA---AACGTGTTAATGACAAATGAAGAAGAAATTCGTC
 rh.48-D 1648 GCA-----GCTAAT---AAGACTACACTGGAA---AATGTGTTAATGACAAATGAAGAAGAAATTCGTC
 rh.55-D 1648 GCA-----GCTAAT---AAGACTACACTGGAA---AATGTGTTAATGACAAATGAAGAAGAAATTCGTC
 rh.62-D 1648 GCA-----GCTAAT---AAGACTACACTGGAA---AATGTGTTAATGACAAATGAAGAAGAAATTCGTC
 AAV7-D 1648 GCA-----ACTAAC---AAAACACTACATTGGAA---AATGTGTTAATGACAAATGAAGAAGAAATTCGTC
 rh.52-E 1648 GCT-----GGAAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA
 rh.51-E 1648 GCT-----GGAAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA
 hu.39-E 1648 GCT-----GGAAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA
 rh.53-E 1648 GCT-----GGAAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA
 hu.37-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA
 rh.43-E 1642 GCT-----GCCAGAGACAAATGCCGATTACAGC---GATGTCATGCTCACCCAGCGGAGGAAATCAAAA
 rh.50-E 1648 GCT-----GGA AAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA
 rh.49-E 1648 GCT-----GGA AAAAGACAAACATGGGCTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA
 rh.61-E 1648 GCT-----GGA AAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA
 hu.41-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA
 rh.64-E 1648 GCT-----GGA AAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA
 hu.42-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA
 rh.57-E 1648 GCT-----GGA AAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA
 hu.40-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA
 AAV8-E 1648 GCT-----GCCAGAGACAAATGCCGATTACAGC---GATGTCATGCTCACCCAGCGGAGGAAATCAAAA
 rh.58-E 1648 GCT-----GGA AAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA
 rh.40-E 1648 GCT-----GGAAGAGACAAATGTGGACTATAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA
 hu.67-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA
 hu.17-E 1648 GCT-----GGA AAAAGACAAACGTGGACTATAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA
 hu.6-E 1648 GCT-----GGA AAAAGACAAACGTGGACTATAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA
 hu.66-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA

FIG. 3B

rh.38-E 1648 GCT-----GGAAGAGACAATGTGGACTACAGC---AGCGTTATGCTAACGCGAAGAAGAAATTAAAA
 hu.32-F 1642 ACT-----GGAAGAGACAACGTGGATCGGAC---AAAGTCATGATAACCAACGAAGAAGAAATTAAAA
 AAV9/hu 1642 ACT-----GGAAGAGACAACGTGGATCGGAC---AAAGTCATGATAACCAACGAAGAAGAAATTAAAA
 hu.31-F 1642 ACT-----GGAAGAGACAACGTGGATCGGAC---AAAGTCATGATAACCAACGAAGAAGAAATTAAAA

 AAV5 1670|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
 AAV3-3- 1670 CGGTGAACCCGCGTGGCGTACAACGTCGGCGGGCAGATGGCCACCAACAACCCAGAGCTCCACCACCTGCCCC
 AAV4-4- 1703 CCACCAATCCTGTGGCAACAGAGCAGTATGGAACCTGTGGCAAAATAAAGTTCAGAGCTCAATATACAGCTCC
 AAV1-A- 1697 CCACCAACGCCACCGATACGGACATGTGGGCAACCTACCTGGCGGTGACCCAGAGCAACAGCAACCTGCC
 hu.46-A 1703 CCACTAACCCCTGTGGCCACCCGAAAGATTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC
 hu.48-A 1703 CCACTAACCCCTGTGGCCACCCGAAAGATTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC
 hu.44-A 1703 CCACTAACCCCTGTGGCCACCCGAAAGATTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC
 hu.43-A 1706 CCACTAACCCCTGTGGCCACCCGAAAGATTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC
 AAV6-A 1703 CCACTAACCCCTGTGGCCACCCGAAAGATTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC
 hu.34-B 1700 CAACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.47-B 1700 CAACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.29-B 1700 CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.63-B 1700 CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.56-B 1700 CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.45-B 1700 CAACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.57-B 1697 CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.35-B 1700 CAACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.58-B 1700 CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.28-B 1700 CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.51-B 1700 CAACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.19-B 1700 CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.49-B 1700 CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.52-B 1700 CAACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC

FIG. 3B

hu.13-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTGCAGGGGGGCAACACACAAGC
 AAV2-B 1700 CAACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACACACAAGC
 hu.20-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGGGGCAACACAAGC
 hu.24-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGGGGCAACACAAGC
 hu.64-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGGGGCAACACAAGC
 hu.27-B 1700 CCACCAATCCCGGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGGGGCAACACAAGC
 hu.21-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGGGGCAACACAAGC
 hu.22-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGGGGCAACACAAGC
 hu.23-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGGGGCAACACAAGC
 hu.7-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.61-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 rh.56-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.9-C 1700 CCACCAATCCCGTGGCTACAGAGCAGTACGGAAACGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.54-C 1697 CCACCAATCCCGTGGCTACAGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.53-C 1697 CCACCAATCCCGTGGCTACAGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.60-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGAACTGTATCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.55-C 1697 CCACCAATCCCGTGGCTACAGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.2-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGGACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.1-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGGACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.18-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.3-C 1703 CCACCAATCCCGTGGCTACGGAGCAGTACGGGACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.25-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGGACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.15-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.16-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGCAAAATAATTTGCAAGACTCAAATACTGGTCC
 hu.11-C 1700 CCACCAATCCCGTGGCTACAGAGCAGTACGGAAACGTGTCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.10-C 1700 CCACCAATCCCGTGGCTACAGAGCAGTACGGAAACGTGTCAAAATAATTTGCAAAACTCAAATACTGGTCC
 hu.4-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGGACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC
 rh.54-D 1706 CTACTAATCCTGTGGCCACAGAAGAAATACGGGATAGTCAGCAGCAATTTACAAGCGGCCAATACTGCAGC
 rh.48-D 1706 CTACCAACCCGGTAGCCACCGAGGAATACGGGACTGTAGCAGCAACCTGCAGGGGGCTAACACTGCAGC
 rh.55-D 1706 CTACCAACCCGGTAGCCACCGAGGAATACGGGACTGTAGCAGCAACCTGCAGGGGGCTAACACTGCAGC

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rh. 62-D	1706	CTACCAACCCGGTAGCCACCAGGAATACGGGACTGTTAGCAGCAACCTGCAGGGGGCTAACACTGCAGC	1830	1840	1850	1860	1870	1880	1890
AAV7-D	1706	CTACTAATCCTGTAGCCACGGAAGATACGGGATAGTCAGCAGCAACTTACAAGCGGGCTAATACTGCAGC							
rh. 52-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 51-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 39-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 53-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 37-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
rh. 43-E	1703	CCACTAACCCCGTAGCCACAGAACATACGGTGTGGTGGCTGATAACCTTGACGAGCAAAACACCGCTCC							
rh. 50-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 49-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 61-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 41-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
rh. 64-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 42-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
rh. 57-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 40-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
AAV8-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGTGGTGGCTGATAACCTTGACGAGCAAAACACCGCTCC							
rh. 58-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 40-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGTGGTGGCTGACAACTTGACGCAAGCCAATACAGGGCC							
hu. 67-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGTGGTGGCTGACAACTTGACGCAAGCCAATACAGGGCC							
hu. 17-E	1709	CCACCAACCCCGTAGCCACAGAACAGTACGGCGTGGTGGCGGATACCTTGCAACAGCAAAACGCCGCTCC							
hu. 6-E	1709	CCACCAACCCCGTAGCCACAGAACAGTACGGCGTGGTGGCGGATACCTTGCAACAGCAAAACGCCGCTCC							
hu. 66-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
rh. 38-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
hu. 32-F	1703	CTACTAACCCCGTAGCAACGGAGTCCTATGGACAAGTGGCCACAAACCACAGAGTGCCCAAGCACAGGC							
AAV9/hu	1703	CTACTAACCCCGTAGCAACGGAGTCCTATGGACAAGTGGCCACAAACCACAGAGTGCCCAAGCACAGGC							
hu. 31-F	1703	CTACTAACCCCGTAGCAACGGAGTCCTATGGACAAGTGGCCACAAACCACAGAGTGCCCAAGCACAGGC							

.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|

FIG. 3B1

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AAV5 1740 CGGACCGGCACGTACAACCTCCAGGAAATCGTGCCCGGCAGCGTGTGGATGGAGAGGACGTGTACCTC
 AAV3-3 1773 CACGACTGGAACGTCAATCATCAGGGGGCCCTTACCTGGCATGGTGTGGCAAGATCGTGACGTGTACCTT
 AAV4-4 1767 GACCGTGACAGACTGACAGCCTTGGAGCCGTGCCCTGGAATGGTCTGGCAAAACAGAGACATTTACTAC
 AAV1-A 1773 TGCAGCCGGAGATGTGCATGCTATGGAGCATTACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG
 hu.46-A 1773 TGCAGCCGGAGATGTGCATGCTATGGAGCATTACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG
 hu.48-A 1773 TGCAGCCGGAGATGTGCATGCTATGGAGCATTACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG
 hu.44-A 1773 TGCAGCCGGAGATGTGCATGCTATGGAGCATTACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG
 hu.43-A 1776 TGCAGCCGGAGATGTGCATGCTATGGAGCATTACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG
 AAV6-A 1773 TGCAGCCGGAGATGTGCATGTTATGGAGCCCTTACCTGGAATGGTGTGGCAAGACAGAGACGTATACCTG
 hu.34-B 1770 AGTACCCGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTT
 hu.47-B 1770 AGTACCCGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTT
 hu.29-B 1770 AGTACCCGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTT
 hu.63-B 1770 AGTACCTCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.56-B 1770 AGTACCTCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.45-B 1770 AGTACCCGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTT
 hu.57-B 1767 AGTACCTCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTT
 hu.35-B 1770 AGTACCCGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTT
 hu.58-B 1770 ATCTACTGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.28-B 1770 AGTACCCGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.51-B 1770 AGTACCCGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTT
 hu.19-B 1770 AGTACCTCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.49-B 1770 AGTACTGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.52-B 1770 AGTACCCGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTT
 hu.13-B 1770 AGTACCCGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 AAV2-B 1770 AGTACCCGCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTT
 hu.20-B 1770 AGTACCTCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.24-B 1770 AGTACCTCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.64-B 1770 AGTACCTCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.27-B 1770 AGTACCTCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.21-B 1770 AGTACCTCAGATGTCAACACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG

FIG. 3BU

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hu.22-B 1770 AGCTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.23-B 1770 AGCTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.7-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGCATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.61-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 rh.56-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGCATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.9-C 1770 AACTACAGAAATGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.54-C 1767 AAGTACTGAACTGTGAATCACCAGGAGCATTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.53-C 1767 AAGTACTGAACTGTGAATCACCAGGAGCATTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.60-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.55-C 1767 AAGTACTGAACTGTGAATCACCAGGAGCATTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.2-C 1770 AACTACTGGAACGTCAATCGCCAAAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.1-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.18-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.3-C 1773 AACTACAGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.25-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.15-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.16-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.11-C 1770 AACTACAGAAATGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.10-C 1770 AACTACAGAAATGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu.4-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 rh.54-D 1776 CCAGACACAAGTTGTCAACAACCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGGACGTGTACCTG
 rh.48-D 1776 CCAGACACAAGTTGTCAACAACCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGGACGTGTACCTG
 rh.55-D 1776 CCAGACACAAGTTGTCAACAACCAGGAGCGTTACCTGGTATGGTCTGGCAGAACCCGGGACGTGTACCTG
 rh.62-D 1776 CCAGACACAAGTTGTCAACAACCAGGAGCGTTACCTGGTATGGTCTGGCAGAACCCGGGACGTGTACCTG
 AAV7-D 1776 CCAGACACAAGTTGTCAACAACCAGGAGCGTTACCTGGTATGGTCTGGCAGAACCCGGGACGTGTACCTG
 rh.52-E 1779 TATTGTGGGGCCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGGACGTGTACTTG
 rh.51-E 1779 TATTGTGGGGCCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGGACGTGTACTTG
 hu.39-E 1779 TACTGTGGGGCCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGGACGTGTACTTG
 rh.53-E 1779 TATTGTGGGGCCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGGACGTGTACTTG
 hu.37-E 1779 TATTGTGGGAAATGTCAACAGCCAAAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGGACGTGTACTTG

FIG. 3BV

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rh. 43-E	1773	TCAAATTGGA	1900	1910	1920	1930	1940	1950	1960
rh. 50-E	1779	TATTGTGGG						
rh. 49-E	1779	TATTGTGGG						
rh. 61-E	1779	TATTGTGGG						
hu. 41-E	1779	TATTGTGGG						
rh. 64-E	1779	TATTGTGGG						
hu. 42-E	1779	TATTGTGGG						
rh. 57-E	1779	TATTGTGGG						
hu. 40-E	1779	TATTGTGGG						
AAV8-E	1779	TCAAATTGGA						
rh. 58-E	1779	TATTGTGGG						
rh. 40-E	1779	TATTGTGGG						
hu. 67-E	1779	TATTGTGGG						
hu. 17-E	1779	TATTGTAGG						
hu. 6-E	1779	TATTGTAGG						
hu. 66-E	1779	TATTGTGGG						
rh. 38-E	1779	TATTGTGGG						
hu. 32-F	1773	GCAGACGGC						
AAV9/hu	1773	GCAGACGGC						
hu. 31-F	1773	GCAGACGGC						
AAV5	1810	CAAGGACCC						
AAV3-3	1843	CAAGGACCT						
AAV4-4	1837	CAGGGTCCC						
AAV1-A	1843	CAGGGTCCC						
hu. 46-A	1843	CAGGGTCCC						
hu. 48-A	1843	CAGGGTCCC						
hu. 44-A	1843	CAGGGTCCC						

FIG. 3BW

hu. 43-A 1846 CAGGGTCCCATTGGGCCAAAATTCTCACAACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT
 AAV6-A 1843 CAGGTCCCTATTGGGCCAAAATTCTCACAACAGATGGACACTTTCACCCGCTCTCCTCTCATGGGCGGCT
 hu. 34-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT
 hu. 47-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT
 hu. 29-B 1840 CAGGGCCCTATTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 63-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 56-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 45-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 57-B 1837 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT
 hu. 35-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 58-B 1840 CAGGGCCCTATTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT
 hu. 28-B 1840 CAGGGCCCTATTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 51-B 1840 CAGGGCCCTATTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 19-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT
 hu. 49-B 1840 CAGGGCCCTATTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 52-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 13-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 AAV2-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT
 hu. 20-B 1840 CAGGGCCCTATTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 24-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 64-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 27-B 1840 CAGGGCCCTATTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 21-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 22-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 23-B 1840 CAGGGCCCCATCTGGGCAAAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT
 hu. 7-C 1840 CAGGACCCCATTTGGGCCAAAGATTCCTCACACCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
 hu. 61-C 1840 CAGGACCCCATTTGGGCCAAAGATTCCTCACACCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
 rh. 56-C 1840 CAGGACCCCATTTGGGCCAAAGATTCCTCACACCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
 hu. 9-C 1840 CAGGACCCCATTTGGGCCAAAGATTCCTCACACCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
 hu. 54-C 1837 CAGGACCCCATTTGGGCCAAAGATTCCTCACACCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT

FIG. 3BX

hu. 53-C	1837	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 60-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 55-C	1837	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 2-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 1-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGACGGGAGGTT
hu. 18-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 3-C	1843	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 25-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 15-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 16-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 11-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 10-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 4-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
rh. 54-D	1846	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
rh. 48-D	1846	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
rh. 55-D	1846	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
rh. 62-D	1846	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
AAV7-D	1846	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
rh. 52-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
rh. 51-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
hu. 39-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
rh. 53-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
hu. 37-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
rh. 43-E	1843	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
rh. 50-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
rh. 49-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
rh. 61-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
hu. 41-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
rh. 64-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT
hu. 42-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGCTCCCGCTGATGGGCGGCT

FIG. 3BY

rh. 57-E	1849	CAGGGTCCCTATTGGGCCAAGATTCCCTCACACAGATGGCAACTTTCACCCGTCTCCTTTAATGGGGGGCT	1970	1980	1990	2000	2010	2020	2030
hu. 40-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTCCACCCCTTACCCGCTAATGGGAGGAT						
AAV8-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTCCACCCGCTCCTCCGCTGATGGGGGGCT	1880						
rh. 58-E	1849	CAGGGTCCCTATTGGGCCAAGATTCCCTCACACAGATGGCAACTTTCACCCGCTCCTCTTAATGGGGGGCT	1913						
rh. 40-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCACCCGCTCCTCTGATGGGGGGCT	1907						
hu. 67-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCACCCCTTACCCGCTAATGGGAGGAT	1913						
hu. 17-E	1849	CAGGGTCCCTATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCATCCTTCGCCGCTGATGGGAGGCT	1913						
hu. 66-E	1849	CAGGGTCCCTATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCATCCTTCGCCGCTGATGGGAGGCT	1913						
rh. 38-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCACCCCTTACCCGCTAATGGGAGGAT	1913						
hu. 32-F	1843	CAAGGACCCCATTTGGGCCAAAATTCCCTCACACGACGGCAACTTTCACCCCTTTCACCCCTAATGGGAGGCT	1913						
AAV9/hu	1843	CAAGGACCCCATTTGGGCCAAAATTCCCTCACACGACGGCAACTTTCACCCCTTTCACCCCTAATGGGAGGCT	1913						
hu. 31-F	1843	CAAGGACCCCATTTGGGCCAAAATTCCCTCACACGACGGCAACTTTCACCCCTTTCACCCCTAATGGGAGGCT	1913						
AAV5		TCGGACTCAAACACCCACCGCCCATGATGCTCATCAAGAACACGCGCTGTGCCCGGAAAT---ATCACCCAG	1880						
AAV3-3		TTGGACTGAACATCCGCTTCTCAATCATGATCAAAAATATCTCCGGTACCGGCAAAATCCTCCGACGAC	1913						
AAV4-4		TTGGGTGAACACCCCGCTCCTCAATTTTATCAAGAACACCCCGGTACCTGCGAATCCTGCAACGAC	1907						
AAV1-A		TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCTGCGAATCCTCCGGCGGA	1913						
hu. 46-A		TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCTGCGAATCCTCCGGCGGA	1913						
hu. 48-A		TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCTGCGAATCCTCCGGCGGA	1913						
hu. 44-A		TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCTGCGAATCCTCCGGCGGA	1913						
hu. 43-A		TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCTGCGAATCCTCCGGCGGA	1916						
AAV6-A		TTGGACTTAAGCACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCTGCGAATCCTCCGGCGGA	1913						
hu. 34-B		TCGGACTTAACACACCCCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCTGCGAATCCTCCGGCGAGA	1910						
hu. 47-B		TCGGACTTAACACACCCCTCCTCAGATCCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCCAC	1910						
hu. 29-B		TCGGACTTAACACACCCCTCCTCAGATCCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCCAC	1910						
hu. 63-B		TCGGACTTAACACACCCCTCCTCAGATCCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACTAC	1910						
hu. 56-B		TTGGACTTAACACACCCCTCCTCAGATCCTCATTAAGAAATACCCCGGTACCTGCGAATCCTTCGACCCAC	1910						

FIG. 3BZ

hu.45-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.57-B 1907 TTGGACTTAAACACCCCTCCTCCACAGATTCTCATTAAGAATACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.35-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.58-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAAAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.28-B 1910 TTGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.51-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.19-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.49-B 1910 TTGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.52-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.13-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 AAV2-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.20-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.24-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.64-B 1910 TCGGACTTAAACACCCCTCCTCCCGCAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACTAC
 hu.27-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.21-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.22-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.23-B 1910 TTGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu.7-C 1910 TTGGGCTCAAACACCCGCTCCTCAGATCATGATCAAAAACACTCCCGTTCAGCCAATCCTCCACAAA
 hu.61-C 1910 TTGGACTCAAACACCCACCTCCTCAATCATGATCAAAAACACTCCCGTTCAGCCAATCCTCCACAAA
 rh.56-C 1910 TTGGGCTCAAACACCCGCTCCTCAGATCATGATCAAAAACACTCCCGTTCAGCCAATCCTCCACAAA
 hu.9-C 1910 TTGGACTCAAACACCCGCTCCTCAATCATGATCAAAAACACTCCCGTTCAGCCAATCCTCCACAAA
 hu.54-C 1907 TTGGACTCAAACACCCGCTCCTCAGATTATGATCAAAAACACTCCCGTTCAGCCAATCCTCCACAAA
 hu.53-C 1907 TTGGACTCAAACACCCGCTCCTCAGATTATGATCAAAAACACTCCCGTTCAGCCAATCCTCCACAAA
 hu.60-C 1910 TTGGACTCAAACACCCACCTCCTCAATCATGATCAAAAACACTCCCGTTCAGCCAATCCTCCACAAA
 hu.55-C 1907 TTGGACTCAAACACCCGCTCCTCAGATTATGATCAAAAACACTCCCGTTCAGCCAATCCTCCACAAA
 hu.2-C 1910 TTGGACTCAAACACCCGCTCCTCAGATCATGATCAAAAACACTCCCGTTCAGCCAATCCTCCACAAA
 hu.1-C 1910 TTGGACTCAAACACCCGCTCCTCAGATCATGATCAAAAACACTCCCGTTCAGCCAATCCTCCACAAA
 hu.18-C 1910 TTGGGCTCAAACACCCGCTCCTCAGATCATGATCAAAAACACTCCCGTTCAGCCAATCCTCCTACAAA
 hu.3-C 1913 TTGGACTCAAACACCCGCTCCTCAGATCATGATCAAAAAGCACTCCCGTTCAGCCAATCCTCCACAAA

FIG. 3CA

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hu.25-C	1910	TTGGACTCAAAACACCCGCTCCTCAGATTATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCTACAAA
hu.15-C	1910	TTGGACTCAAAACACCCACCTCCTCAGATCATGATTAATAAACACTCCCGTTCCAGCCAAATCCTCCACAAA
hu.16-C	1910	TTGGACTCAAAACACCCACCTCCTCAGATCATGATTAATAAACACTCCCGTTCCAGCCAAATCCTCCACAAA
hu.11-C	1910	TTGGACTCAAAACACCCGCTCCTCAAATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCACAAA
hu.10-C	1910	TTGGACTCAAAACACCCGCTCCTCAAATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCACAAA
hu.4-C	1910	TTGGACTCAAAACACCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCACAAA
rh.54-D	1916	TTGGACTGAAGCATCCGCTCCTCAGATCCTGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCACAAA
rh.48-D	1916	TTGGACTGAAGCATCCGCTCCTCAGATCCTGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCACAAA
rh.55-D	1916	TTGGACTGAAGCATCCGCTCCTCAGATCCTGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCACAAA
rh.62-D	1916	TTGGACTGAAGCATCCGCTCCTCAGATCCTGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCACAAA
AAV7-D	1916	TTGGACTTAAACATCCGCTCCTCAGATCCTGATCAAGAAACACTCCCGTTCCCGCTAAATCCTCCGAGGT
rh.52-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCCTCATCAAAAAACACTCCCGTTCCCGCTAAATCCTCCGAGGT
rh.51-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCCTCATCAAAAAACACTCCCGTTCCCGCTAAATCCTCCGAGGT
hu.39-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCCTCATCAAAAAACACTCCCGTTCCCGCTAAATCCTCCGAGGT
rh.53-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCCTCATCAAAAAACACTCCCGTTCCCGCTAAATCCTCCGAGGT
hu.37-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCCTGATCAAGAAACACGCGGTACCTGCGGATCCTCCAAACAAC
rh.43-E	1913	TTGGCTGAAACATCCTCCGCTCAGATCCTGATCAAGAAACACGCGGTACCTGCGGATCCTCCGACCAC
rh.50-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCCTCATCAAAAAACACTCCCGTTCCCGCTAAATCCTCCGAGGT
rh.49-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCCTCATCAAAAAACACTCCCGTTCCCGCTAAATCCTCCGAGGT
rh.61-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCCTCATCAAAAAACACTCCCGTTCCCGCTAAATCCTCCGAGGT
hu.41-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCCTGATCAAGAAACACGCGGTACCTGCGGATCCTCCAAACAAC
rh.64-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCCTCATCAAAAAACACTCCCGTTCCCGCTAAATCCTCCGAGGT
hu.42-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCCTGATCAAGAAACACGCGGTACCTGCGGATCCTCCAAACAAC
rh.57-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCCTCATCAAAAAACACTCCCGTTCCCGCTAAATCCTCCGAGGT
hu.40-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCCTGATCAAGAAACACGCGGTACCTGCGGATCCTCCAAACAAC
AAV8-E	1919	TTGGCTGAAACATCCTCCGCTCAGATCCTGATCAAGAAACACGCGGTACCTGCGGATCCTCCGAGGT
rh.58-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCCTGATCAAGAAACACGCGGTACCTGCGGATCCTCCGAGGT
rh.40-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCCTCATCAAAAAACACTCCCGTTCCCGCTAAATCCTCCGAGGT
hu.67-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCCTGATCAAGAAACACGCGGTACCTGCGGATCCTCCAAACAAC
hu.17-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCCTGATTAAGAAATACACCTGTTCCCGCTAAATCCTCCGAGGT

FIG. 3CB

hu.6-E	1919	TTGGACTGAAACACCCGCTCCTCAGATCCTGATTAAGAATACACCTGTTCCTCCGGGATCCTCCAACTAC	2040	2050	2060	2070	2080	2090	2100
hu.66-E	1919	TTGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAGAACACGCCGTACCTGCGGATCCTCCAACAAC							
rh.38-E	1919	TTGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAGAACACGCCGTACCTGCGGATCCTCCAACAAC							
hu.32-F	1913	TTGGAATGAAGCACCCGCTCCTCAGATCCTCATCAAAAACACACCTGTACCTGCGGATCCTCCAACGGC							
AAV9/hu	1913	TTGGAATGAAGCACCCGCTCCTCAGATCCTCATCAAAAACACACCTGTACCTGCGGATCCTCCAACGGC							
hu.31-F	1913	TTGGAATGAAGCACCCGCTCCTCAGATCCTCATCAAAAACACACCTGTACCTGCGGATCCTCCAACGGC							
AAV5	1947	CTTCTCGGACGTGCCCGTCAGCAGCTTCATCACCCAGTACAGCACCGGGCAGGTCAACCGTGGAGATGGAG						
AAV3-3	1983	TTTCAGCCCGCAAGTTTGCTTCATTTATCACTCAGTACTCCACTGGACAGGTCAAGCGTGGAATTGAG							
AAV4-4	1977	CTTCAGCTCTACTCCGGTAACTCCTTCATTACTCAGTACAGCACTGGCCAGGTGTCGGTGCAGATTGAC							
AAV1-A	1983	GTTTTTCAGCTACAAAAGTTTGCTTCATTATCATCCCCAATACTCCAGAGGACAAAGTGAATTTGAA							
hu.46-A	1983	GTTTTTCAGCTACAAAAGTTTGCTTCATTATCATCCCCAATACTCCAGAGGACAAAGTGAATTTGAA							
hu.48-A	1983	GTTTTTCAGCTACAAAAGTTTGCTTCATTATCATCCCCAATACTCCAGAGGACAAAGTGAATTTGAA							
hu.44-A	1983	GTTTTTCAGCTACAAAAGTTTGCTTCATTATCATCCCCAATACTCCAGAGGACAAAGTGAATTTGAA							
hu.43-A	1986	GTTTTTCAGCTACAAAAGTTTGCTTCATTATCATCCCCAATACTCCAGAGGACAAAGTGAATTTGAA							
AAV6-A	1983	GTTTTTCGGCTACAAAAGTTTGCTTCATTATCATCCCCAGTATTCACAGGACAAAGTGAATTTGAA							
hu.34-B	1980	CTTCAGTGCGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.47-B	1980	CTTCAGTGCGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.29-B	1980	CTTCAGTGCGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.63-B	1980	CTTCAGTGCGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.56-B	1980	CTTCAGTGCGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.45-B	1980	CTTCAGTGCGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.57-B	1977	CTTCAGTGCGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.35-B	1980	CTTCAGTGCGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.58-B	1980	CTTCAGTGCGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.28-B	1980	CTTCAGTGCGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.51-B	1980	CTTCAGTGCGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.19-B	1980	TTTCAGTGCGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							

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hu.49-B 1980 CTTAGTGGGCAAGTTTGCTTCCTTCATCACACAGTATCCACAGGGCAGGTCAGCGTGGAGATCGAG
 hu.52-B 1980 CTTAGTGGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAGCGTGGAGATCGAG
 hu.13-B 1980 CTTAGTGGGCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 AAV2-B 1980 CTTAGTGGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAGCGTGGAGATCGAG
 hu.20-B 1980 TTTAGTGGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.24-B 1980 TTTAGTGGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.64-B 1980 CTTAGTGGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.27-B 1980 TTTAGTGGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.21-B 1980 TTTAGTGGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.22-B 1980 TTTAGTGGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.23-B 1980 TTTAGTGGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.7-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.61-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 rh.56-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.9-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.54-C 1977 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.53-C 1977 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.60-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.55-C 1977 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.2-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.1-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.18-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.3-C 1983 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.25-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.15-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.16-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.11-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.10-C 1980 CTACAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 hu.4-C 1980 CTTAGTCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG
 rh.54-D 1986 GTTTACGCCTGCCAAGTTTGCTTCCTTCATCACACAGTATCCACGGGCGAGGTCAGCGTGGAGATCGAG

FIG. 3C

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rh. 48-D	1986	GTTACGCCCTGCCAAGTTTGCTTCTTTTCATCACACAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 55-D	1986	GTTACGCCCTGCCAAGTTTGCTTCTTTTCATCACACAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 62-D	1986	GTTACGCCCTGCCAAGTTTGCTTCTTTTCATCACACAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
AAV7-D	1986	GTTTACTCCTGCCAAGTTTGCTTCTTTTCATCACACAGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAG
rh. 52-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 51-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
hu. 39-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCGCGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 53-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
hu. 37-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 43-E	1983	CTTCAACCAAGTCAAAGCTGAATCTTTTCATCACGCAATACAGCACCGGCCAGGTCAGCGTGGAAATTGAA
rh. 50-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 49-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 61-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
hu. 41-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 64-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAG
hu. 42-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGTG
rh. 57-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAG
hu. 40-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
AAV8-E	1989	CTTCAACCAAGTCAAAGCTGAATCTTTTCATCACGCAATACAGCACCGGCCAGGTCAGCGTGGAAATTGAA
rh. 58-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 40-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
hu. 67-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
hu. 17-E	1989	GTTCAACCAAGGCCAAGCTGAATTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAG
hu. 6-E	1989	CTTCAAGTCAAGCCAAAGCTGGCGTGGTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAA
hu. 66-E	1989	CTTCAAGTCAAGCCAAAGCTGGCGTGGTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAA
rh. 38-E	1989	GTTCAAGCCAGGCGAAATGGCTTCTTTTCATCACGCAGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAG
hu. 32-F	1983	TTTCAATAAGGACAAAGCTGAATCTTTTCATCACCCAGTATTTCTACTGGCCAAAGTCAGCGTGGAGATTGAG
AAV9/hu	1983	CTTCAACCAAGGACAAAGCTGAATCTTTTCATCACCCAGTATTTCTACTGGCCAAAGTCAGCGTGGAGATCGAG
hu. 31-F	1983	TTTCAATAAGGACAAAGCTGAATCTTTTCATCACCCAGTATTTCTACTGGCCAAAGTCAGCGTGGAGATTGAG

FIG. 3C

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	2110	2120	2130	2140	2150	2160	2170
						
AAV5	2017	TGGGAGCTCAAGAAGGAAAACTCCAAGAGGTGGAACCCAGAGATCCAGTACACAAACAACACTACACGACC					
AAV3-3	2053	TGGGAGCTACAGAAAAGAAAACAGCAAAACGTTGGAAATCCAGAGATTCAGTACACTTCCAACACTACAACAAGT					
AAV4-4	2047	TGGGAGATCCAGAAGGAGCGGTCCAAACGCTGGAACCCCGAGGTCAGTTTACCTCCAACACTACGGACAGC					
AAV1-A	2053	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.46-A	2053	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.48-A	2053	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.44-A	2053	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.43-A	2056	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
AAV6-A	2053	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.34-B	2050	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.47-B	2050	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.29-B	2050	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.63-B	2050	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.56-B	2050	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.45-B	2050	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.57-B	2047	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.35-B	2050	TGGGAGCTGCAGAAAAGAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAAATTATGCACAAAT					
hu.58-B	2050	TGGGAGCTACAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACTACAACAAAT					
hu.28-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACTACAACAAAT					
hu.51-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACTACAACAAAT					
hu.19-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACTACAACAAAT					
hu.49-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACTACAACAAAT					
hu.52-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACTACAACAAAT					
hu.13-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACTACAACAAAT					
AAV2-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACTACAACAAAT					
hu.20-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACTACAACAAAT					
hu.24-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACTACAACAAAT					
hu.64-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACTACAACAAAT					

FIG. 3CF

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hu. 27-B 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 21-B 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 22-B 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 23-B 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 7-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 61-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 rh. 56-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 9-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 54-C 2047 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 53-C 2047 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 60-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 55-C 2047 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 2-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 1-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 18-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 3-C 2053 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 25-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 15-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 16-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 11-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 10-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 4-C 2050 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 rh. 54-D 2056 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 rh. 48-D 2056 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 rh. 55-D 2056 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 rh. 62-D 2056 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 AAV7-D 2056 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 rh. 52-E 2059 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 rh. 51-E 2059 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT
 hu. 39-E 2059 TGGGAGCTGCAGAAAGGAGAAACAGCAAAACGCTGGAAATCCCGAAAATTCAGTACACTTCCAACTACAACAAAT

FIG. 3C

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rh.53-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTATACTTCCAACTACTACAAAT	2180	2190	2200	2210	2220	2230	2240
hu.37-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT						
rh.43-E	2053	TGGAGCTACAGAAAGGAAACAGCAAGCGCTGGAACCCGAGATCCAGTACACTCCAACCTACTACAAAT	2087						
rh.50-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAGCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT	2123						
rh.49-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT	2117						
rh.61-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT	2123						
hu.41-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGTTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT	2123						
rh.64-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCGAGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT							
hu.42-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGCTGGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT							
rh.57-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT							
hu.40-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT							
AAV8-E	2059	TGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCGAGATCCAGTACACTCCTCCAACTACTACAAAT							
rh.58-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGTGTCTGGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT							
rh.40-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGATGGAACCCAGAGATTTCAGTACACTTCCAACCTACTACAAAT							
hu.67-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT							
hu.17-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTATACTTCCAACCTATAACAAAT							
hu.6-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT							
hu.66-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT							
rh.38-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT							
hu.32-F	2053	TGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCGAGATCCAGTACACTTCCAACCTATTACAAAT							
AAV9/hu	2053	TGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCGAGATCCAGTACACTTCCAACCTATTACAAAT							
hu.31-F	2053	TGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCGAGATCCAGTACACTTCCAACCTATTACAAAT							
AAV5								
AAV3-3		CCCAGTTTGTGGACTTTGCCCCGGACAGCACCGGGGAATACAGAAACCACAGACCTATCGGAACCCGATA							
AAV4-4		CTGTTAATGTGGACTTTACTGTAGACACTAATGGTGTATTATAGTGAACCTCGCCCTATTGGAACCCGGTA							
AAV1-A		AAACTCTCTGTTGTGGCTCCCGATGCGGCTGGGAAATACACTGAGCCTAGGGCTATCGGTACCCGCTA							
hu.46-A		CTGCCAACGTTGATTTTACTGTGGACAAACAATGGACTTTATCTAGAGCTCGCCCATTTGGCACCCCGTTA							
		CTGCCAACGTTGATTTTACTGTGGACAAACAATGGACTTTTATCTAGAGCTCGCCCATTTGGCACCCCGTTA							

FIG. 3CH

hu.48-A	2123	CTGCCAACGTTGATTTTACTGTGGACAACAATGGACTTTTATCTAGAGCCCTGCCCCCATTTGGCACCCGTTA
hu.44-A	2123	CTGCCAACGTTGATTTTACTGTGGACAACAATGGACTTTTATCTAGAGCCCTGCCCCCATTTGGCACCCGTTA
hu.43-A	2126	CTGCCAGCGTTGATTTTACTGTGGACAACAATGGACTTTTATCTAGAGCCCTGCCCCCATTTGGCACCCGTTA
AAV6-A	2123	CTGCCAACGTTGATTTTACTGTGGACAACAATGGACTTTTATCTAGAGCCCTGCCCCCATTTGGCACCCGTTA
hu.34-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.47-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.29-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.63-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGTA
hu.56-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.45-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.57-B	2117	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.35-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.58-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.28-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.51-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.19-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.49-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.52-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.13-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
AAV2-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.20-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCGCCAGATA
hu.24-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.64-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.27-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.21-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.22-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.23-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.7-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.61-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
rh.56-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA

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hu. 9-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTTGCCCCATTGGCACCAGATA
hu. 54-C	2117	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 53-C	2117	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 60-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 55-C	2117	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 2-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 1-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 18-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 3-C	2123	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 25-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 15-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 16-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 11-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 10-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
hu. 4-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCATTGGCACCAGATA
rh. 54-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCCTGCCCCATTGGTACTCGTTA
rh. 48-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCCTGCCCCATTGGTACTCGTTA
rh. 55-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCCTGCCCCATTGGTACTCGTTA
rh. 62-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCCTGCCCCATTGGTACTCGTTA
AAV7-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCCTGCCCCATTGGCACCAGATA
rh. 52-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCCTGCCCCATTGGCACCAGATA
rh. 51-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCCTGCCCCATTGGCACCAGATA
hu. 39-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCCTGCCCCATTGGCACCAGATA
rh. 53-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCCTGCCCCATTGGCACCAGATA
hu. 37-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCCTGCCCCATTGGTACTCGTTA
rh. 43-E	2123	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCCTGCCCCATTGGCACCAGATA
rh. 50-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCCTGCCCCATTGGCACCAGATA
rh. 49-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCCTGCCCCATTGGCACCAGATA
rh. 61-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCCTGCCCCATTGGCACCAGATA
hu. 41-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCCTGCCCCATTGGTACTCGTTA

FIG. 3C

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rh. 64-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTAGGGTGTTTACTCTGAGCCTCGCCCCATTGGCACTCGTTA
hu. 42-E	2129	CTACAAATGTGGACTTTGCTGTCAATACAGAGGAACTTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
rh. 57-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTAGGGTGTTTACTCTGAGCCTCGCCCCATTGGCACTCGTTA
hu. 40-E	2129	CTACAAATGTGGACTTTGCTGTCAATACAGAGGAACTTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
AAV8-E	2129	CTACAAGTGTGGACTTTGCTGTTAATAACAGAGGCGTGTACTCTGAACCCCGCCCATTTGGCACCCGTTA
rh. 58-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTAGGGTGTTTACTCTGAGCCTCGCCCCATTGGCACTCGTTA
rh. 40-E	2129	CTACAAATGTGGACTTTGCTGTCAATTCTGAGGTACATATTCTGAGCCTCGCCCCATTGGTACTCGTTA
hu. 67-E	2129	CTACAAATGTGGACTTTGCTGTCAATACAGAGGAACTTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
hu. 17-E	2129	CTGTTAATGTGGACTTTACTGTGACACTAATGGTGTGTATTCTGAGCCTCGCCCCATTGGCACCCAGATA
hu. 6-E	2129	CTACAAATGTGGACTTTGCTGTCAATCTGAGGTACTTATTCTGAGCCTCGCCCCATTGGCACCCGTTA
hu. 66-E	2129	CTACAAATGTGGACTTTGCTGTCAATACAGAGGAACTTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
rh. 38-E	2129	CTACAAATGTGGACTTTGCTGTCAATACAGAGGAACTTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
hu. 32-F	2123	CTAATAATGTTGAATTTGCTGTTAATACTGAAGGTGTATATAGTGAACCCCGCCCATTTGGCACCCAGATA
AAV9/hu	2123	CTAATAATGTTGAATTTGCTGTTAATACTGAAGGTGTATATAGTGAACCCCGCCCATTTGGCACCCAGATA
hu. 31-F	2123	CTAATAATGTTGAATTTGCTGTTAGTACTGAAGGTGTATATAGTGAACCCCGCCCATTTGGCACCCAGATA

	2250	2260
	
AAV5	2157	CCTTACCCGACCCCTT----
AAV3-3	2193	TCTCACACGAAACTTG----
AAV4-4	2187	CCTCACCCACCACTTGTA--
AAV1-A	2193	CCTTACCCGTCCTCCCTGTAA-
hu. 46-A	2193	CCTTACCCGTCCTCCCTGTAA-
hu. 48-A	2193	CCTTACCCGTCCTCCCTGTAA-
hu. 44-A	2193	CCTTACCCGTCCTCCCTGTAA-
hu. 43-A	2196	CCTTACCCGTCCTCCCTGTAA-
AAV6-A	2193	CCTCACCCGTCCTCCCTGTAA-
hu. 34-B	2190	CCTGACTCGTAATCTGTAA-
hu. 47-B	2190	CCTGACTCGTAATCTGTAA-
hu. 29-B	2190	CCTGACTCGTAATCTGTAA-

FIG. 3CK

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hu.63-B	2190	CCTGACTCGTAATCTGTAA-
hu.56-B	2190	CCTGACTCGTAATCTGTAA-
hu.45-B	2190	CCTGACTCGTAATCTGTAA-
hu.57-B	2187	CCTGACTCGTAATCTGTAA-
hu.35-B	2190	CCTGACTCGTAATCTGTAA-
hu.58-B	2190	CCTGACTCGTAATCTGTAA-
hu.28-B	2190	CCTGACTCGTAATCTGTAA-
hu.51-B	2190	CCTGACTCGTAATCTGTAA-
hu.19-B	2190	CCTGACTCGTAATCTGTAA-
hu.49-B	2190	CCTGACTCGTAATCTGTAA-
hu.52-B	2190	CCTGACTCGTAATCTGTAA-
hu.13-B	2190	CCTGACTCGTAATCTGTAA-
AAV2-B	2190	CCTGACTCGTAATCTGTAA-
hu.20-B	2190	CCTGACTCGTAATCTGTAA-
hu.24-B	2190	CCTGACTCGTAATCTGTAA-
hu.64-B	2190	CCTGACTCGTAATCTGTAA-
hu.27-B	2190	CCTGACTCGTAATCTGTAA-
hu.21-B	2190	CCTGACTCGTAATCTGTAA-
hu.22-B	2190	CCTGACTCGTAATCTGTAA-
hu.23-B	2190	CCTGACTCGTAATCTGTAA-
hu.7-C	2190	CCTGACTCGTAATCTGTAA-
hu.61-C	2190	CCTGACTCGTAATCTGTAA-
rh.56-C	2190	CCTGACTCGTAATCTGTAA-
hu.9-C	2190	CCTGACTCGTAATCTGTAA-
hu.54-C	2187	CCTGACTCGTAATCTGTAA-
hu.53-C	2187	CCTGACTCGTAATCTGTAA-
hu.60-C	2190	CCTGACTCGTAATCTGTAA-
hu.55-C	2187	CCTGACTCGTAATCTGTAA-
hu.2-C	2190	CCTGACTCGTAATCTGTAA-
hu.1-C	2190	CCTGACTCGTAATCTGTAA-

FIG. 3CL

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hu.18-C	2190	CCCGACTCGTAATCTGTAA-
hu.3-C	2193	CCTGACTCGTAATCTGTAA-
hu.25-C	2190	CCTGACTCGTAATCTGTAA-
hu.15-C	2190	CCTGACTCGTAATCTGTAA-
hu.16-C	2190	CCTGACTCGTAATCTGTAA-
hu.11-C	2190	CCTGACTCGTAATCTGTAA-
hu.10-C	2190	CCTGACTCGTAATCTGTAA-
hu.4-C	2190	CCTGACTCGTAATCTGTAA-
rh.54-D	2196	CCTCACCCGTAATCTGTAA-
rh.48-D	2196	CCTCACCCGTAATCTGTAA-
rh.55-D	2196	CCTCACCCGTAATCTGTAA-
rh.62-D	2196	CCTCACCCGTAATCTGTAA-
AAV7-D	2196	CCTCACCCGTAATCTGTAA-
rh.52-E	2199	CCTCACCCGTAATCTGTAA-
rh.51-E	2199	CCTCACCCGTAATCTGTAA-
hu.39-E	2199	CCTCACCCGTAATCTGTAA-
rh.53-E	2199	CCCCACCCGTAATCTGTAA-
hu.37-E	2199	CCTCACCCGTAATCTGTAA-
rh.43-E	2193	CCTCACCCGTAATCTGTAA-
rh.50-E	2199	CCTCACCCGTAATCTGTAA-
rh.49-E	2199	CCTCACCCGTAATCTGTAA-
rh.61-E	2199	CCTCACCCGTAATCTGTAA-
hu.41-E	2199	CCTCACCCGTAATCTGTAA-
rh.64-E	2199	CCTCACCCGTAATCTGTAA-
hu.42-E	2199	CCTCACCCGTAATCTGTAA-
rh.57-E	2199	CCTCACCCGTAATCTGTAA-
hu.40-E	2199	CCTCACCCGTAATCTGTAA-
AAV8-E	2199	CCTCACCCGTAATCTGTAA-
rh.58-E	2199	CCTCACCCGTAATCTGTAA-
rh.40-E	2199	TCTGACACGTAATCTGTAA-

FIG. 3CM

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hu.67-E	2199	CCTCACC CGTAATCTGTAA-
hu.17-E	2199	CCTGACTCGTAATCTGTAA-
hu.6-E	2199	CCTCACC CGTAACCTGTAA-
hu.66-E	2199	CCTCACC CGTAATCTGTAA-
rh.38-E	2199	CCTCACC CGTAATCTGTAA-
hu.32-F	2193	CCTGACTCGTAATCTGTAA-
AAV9/hu	2193	CCTGACTCGTAATCTGTAA-
hu.31-F	2193	CCTGACTCGTAATCTGTAA-

FIG. 3CN

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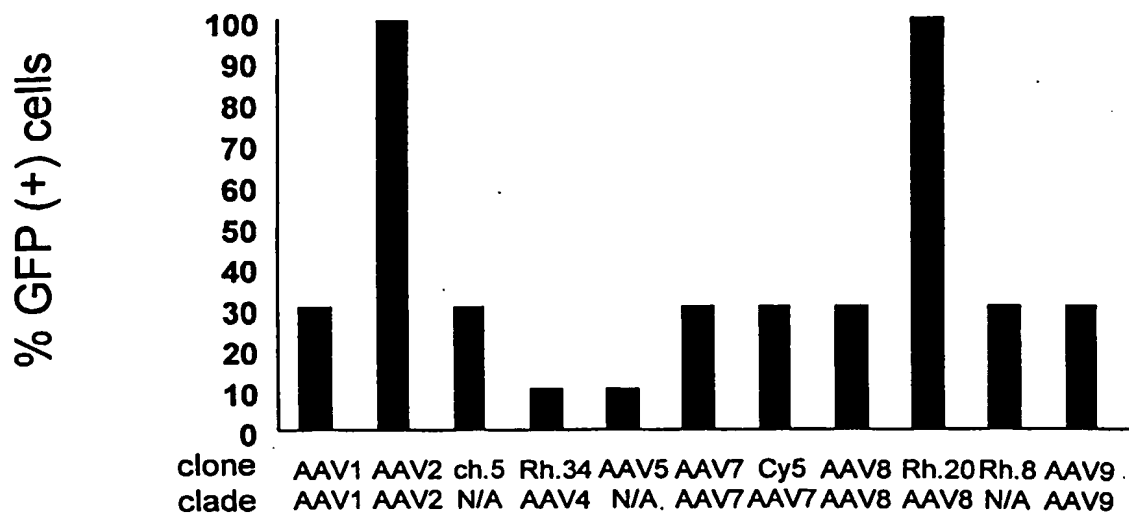


Fig. 4A

In Vitro

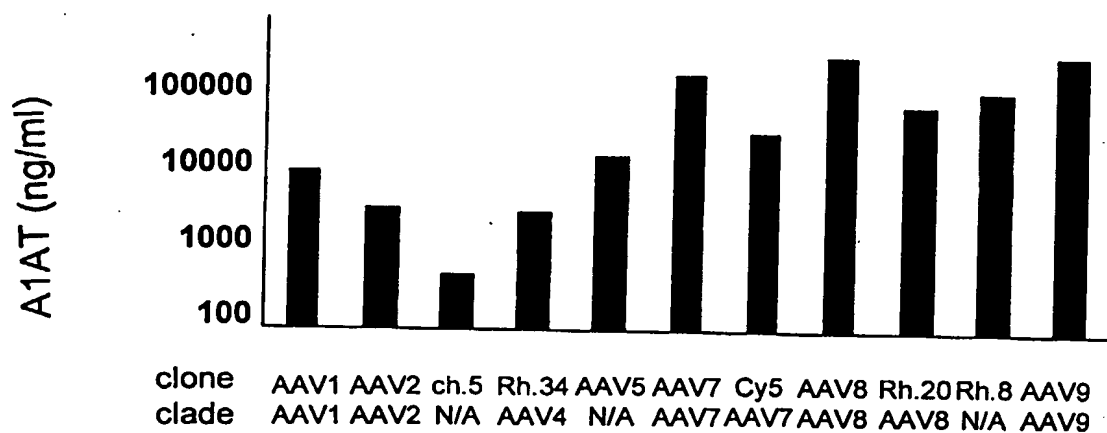


Fig. 4B

Liver

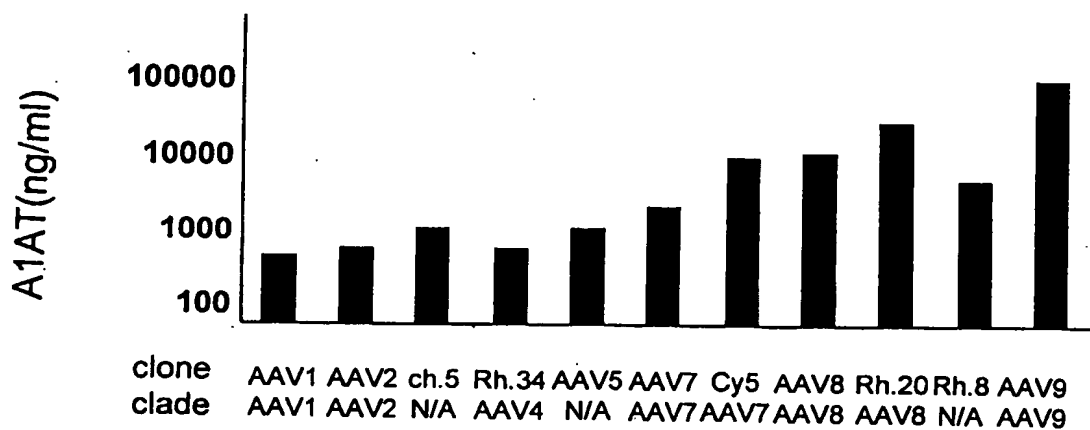


Fig. 4C

Lung

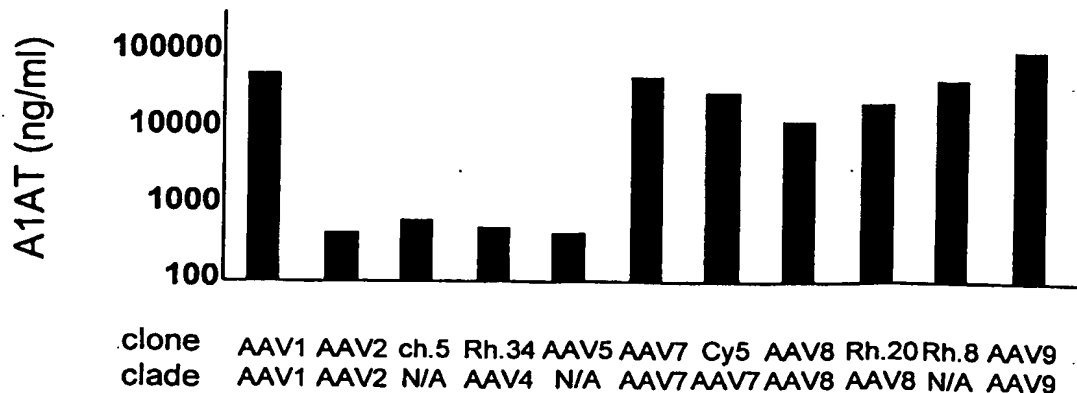


Fig. 4D

Muscle